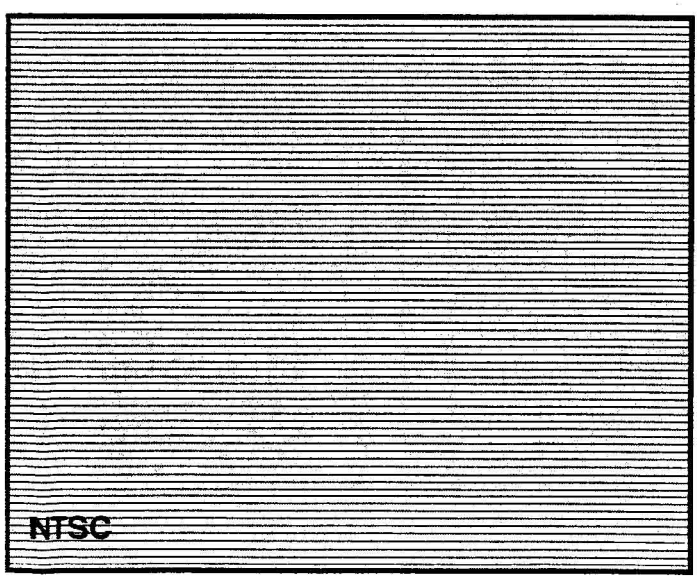
PIONEER

The Art of Entertainment

PROJECTION MONITOR RECEIVER

Operating Instructions



'92 PROJECTION MONITOR RECEIVER ELECTRICAL INFORMATION

Thank you for purchasing the PIONEER Projection Monitor Receiver.
If you have not read the precautionary instructions enclosed with these operating instructions, please do so before proceeding.
After learning how to operate the Projection Monitor be sure to keep this manual handy for future reference.

While the official name of the product is the "PROJECTION MONITOR RECEIVER", for the sake of brevity the text refers to it as the "Projection Monitor" or 'simply' the "Monitor".

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground should be connected to the grounding system of the building, as close to the point of cable entry as practical.

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OPERATING PRECAUTIONS

DO NOT ALLOW STILL PICTURES OR PARTS OF PICTURES THAT DO NOT MOVE TO REMAIN ON THE SCREEN FOR AN EXTENDED LENGTH OF TIME. STILL IMAGES CAN ADVERSELY AFFECT YOUR PICTURE PROJECTION TUBES. SOME EXAMPLES OF STILL IMAGES ARE COMPUTERS, TELEVISION PROGRAMMING LOGOS AND VIDEO GAMES. IF STILL PICTURES CANNOT BE AVOIDED, REDUCE THE BRIGHTNESS AND CONTRAST LEVELS OF THE PICTURE TO MINIMIZE ANY DAMAGE THAT MIGHT OCCUR.

IMPORTANT NOTICE

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.

The model number and the serial number of this Projection Monitor are located on the rear panel.
Please write the serial number on the enclosed warranty card and keep it in a safe place for future reference.

NOTE:
There are no user serviceable parts inside the Projection Monitor.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Notes for the PIP video processing functions
Use of the PIP (Picture in Picture) video processing functions provided in this monitor is intended for private viewing only.
Use of the above video processing functions for profit making purposes or for public viewing (clubs, hotels etc.) without prior authorization from the transmitter and/or owner of the video program(s) may be an infringement of existing copyright laws.

PRELIMINARY INSTRUCTIONS

WHERE TO PUT THE MONITOR

LIGHTING

Bright lights or direct sunlight will dull the picture. Position the monitor so that the screen faces away from windows.

AIR CIRCULATION

Leave space for air to circulate behind the monitor. Keep it away from curtains and other furnishings that could block ventilation.

HEAT DAMAGE

Damage may occur if you leave the monitor in direct sunlight or near a heater.

OPTIMUM VIEWING DISTANCE

10 to 23 feet is the range recommended for viewing comfort.

POWER SOURCE

This Projection Monitor operates on AC 120 V, standard household voltage.

NEVER CONNECT THE PROJECTION MONITOR TO OTHER THAN THE SPECIFIED VOLTAGE, OR TO DIRECT CURRENT.

POWER OUTLET

- This monitor requires an AC 120 volt polarized outlet. The plug will fit only one way. If it will not go in, turn it around and try the other way. If you are still unable to insert the plug, call an electrician to replace the wall socket.
- A damaged cord or plug is a fire hazard. If you notice wear or damage, have it fixed by qualified service personnel.
- Plug directly into the wall socket. Do not use extension cords or other receptacles. Do not overload the outlet; it is a fire hazard.

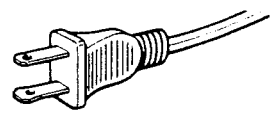
NOTE:

- *Never remove the back cover of the Projection Monitor as this will expose you to dangerously high voltage and other hazards. If the monitor does not operate properly, unplug it and refer to page 44.*

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the monitor, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed in such a way that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electrical shock. Check the power cord regularly. If you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

- POLARIZED PLUG



- DANGEROUS

FEATURES

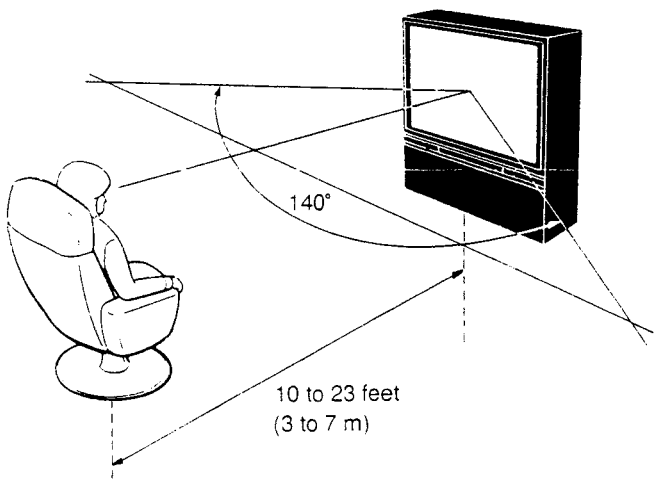
Sharp, Clear Images with 830 line /770 line (SD-P4565) Horizontal Resolution (Video input)

- A 10 MHZ video bandwidth and Dynamic Picture Control circuitry provide sharp detail and crisp outlines.
- Dynamic focusing circuit enhances resolution at picture edges.

Wide Viewing Range Screen

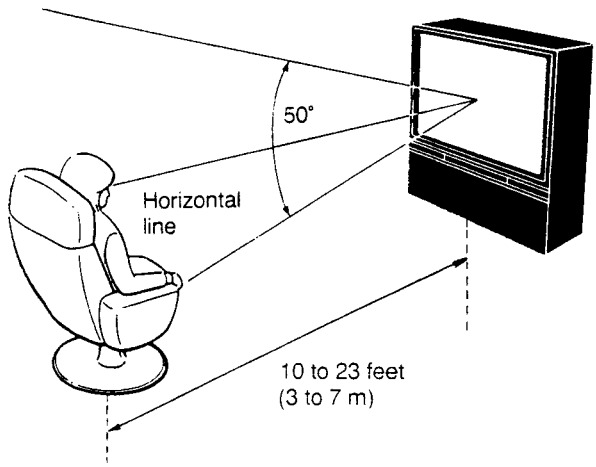
- 140° Horizontal Viewing Angle and 50° Vertical Viewing Angle.

Best Horizontal Viewing Angle



Best Vertical Viewing Angle

Watch from at least 10 feet (3 m) away from the screen. (Optimum viewing distance is 10 to 23 feet.)



You may sometimes see double images or rainbowlike effects if you view from outside of the recommended area shown here.

Amazingly Bright Picture Intensity of 440 (SD-P5567/SD-P5565) /530 (SD-P5067/SD-P5065) /650 (SD-P4565) Foot-Lambert

- New, highly efficient lens system passes more light.
- High-power picture tubes employ advanced anode stabilization circuitry and 6000 pF capacitors.
- Newly developed phosphorescent screen for the picture tubes.

Microcomputerized Dynamic Picture Optimizer (DPO)

- DPO (Dynamic Picture Optimizer) circuit detects room light and optimizes the TV picture accordingly.

Equipped with the VNR (Video Noise Reduction) system for reducing noise on the screen while watching a TV program or prerecorded video cassette tape

- This system reduces noise on the screen, allowing you to enjoy your favorite programs with improved picture quality.

AV Memory

- After adjusting the picture and sound quality, you can store your settings in "AV memory". Two AV memory settings can be stored and recalled.

High fidelity color reproduction and brighter whiteness produced by a newly developed Linear White Circuit

- The linear white circuit adjusts the blue phosphor characteristics and aligns the Red, Green and Blue drive circuits. This allows the monitor to reproduce brighter whites and natural fresh colors.

Dolby Pro Logic Surround system to produce a dramatic sound field with the Dolby surround video sources including TV programs

- Dolby Pro Logic, 3 CH Logic mode.

Newly designed Studium and S. S. (Simulated Stereo) Sound system to reproduce a wider and more dynamic sound field with any video source including TV programs

- Dynamic studium sound effects for sports programs, and a monaural sound modified to produce stereo-like sound. Simulated stereo sound is included in this sound system.

DOLBY SURROUND MODE

• DOLBY PRO LOGIC SURROND

Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND mark) playback.

DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis. You can clearly perceive the directions and source of the music.

Real flow of sound also can be re-created naturally using this feature. It gives the feeling of being in an outstanding and expansive sound filed.

• DOLBY 3 CH LOGIC

By adding the signal for the rear speakers to the signal for the front speakers. the front three channels (front L, front R and CENTER) provide a much wider, more spacious sound field than possible during ordinary stereo playback.

DOLBY PRO LOGIC SURROND is equipped with the following 3 positions for the CENTER MODE.

When using DOLBY 3CH LOGIC, you can select NORMAL or WIDE.

When using center speaker:

• NORMAL

Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. So you can use relatively small size speakers as the center speakers.

• WIDE

If you use large size center speaker, choose this setting The full frequency range of the center speakers, from low to high, is routed to the center speaker.

When not using a center speaker: DOLBY PRO LOGIC SURROUND

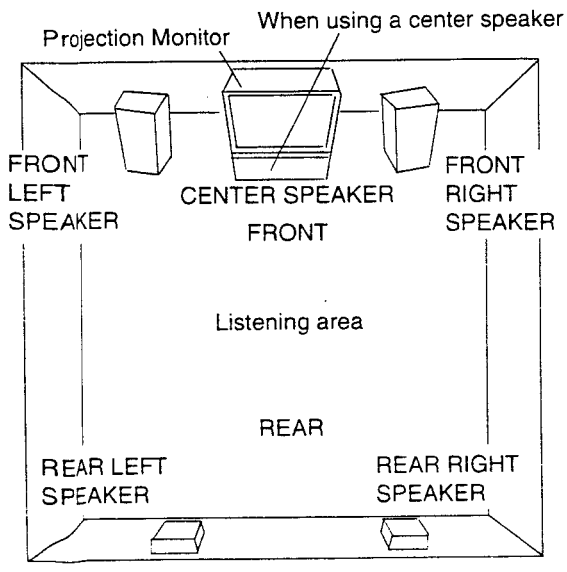
• PAHNTOM

The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

SURROUND SPEAKER INSTALLATION EXAMPLE

To get the best effect out of the surround system, place the speakers as shown below.

An example for center speaker location



NOTE:

- *To avoid interference with the picture on a nearby Projection Monitor, use magnetically shielded speaker systems for all the external speaker system.This is particularly important for the center speaker since it is usually located closest to the Projection Monitor.*
- *Position the left and right channel external speakers at equal distances from the Projection Monitor and approximately six feet (1.8 m) from each other.*
- *Position the cemter external speakers, above, below, or behind the Projection Monitor. Sound may not appear to coincide with the picture if you position it next to the Projection Monitor.*
- *Rear speaker are best positioned slightly above ear level.*

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INSTALLATION

ANTENNA CONNECTION

Connect to an outdoor antenna, cable box or centralized antenna terminal (see page 14 for details).

MOUNTING

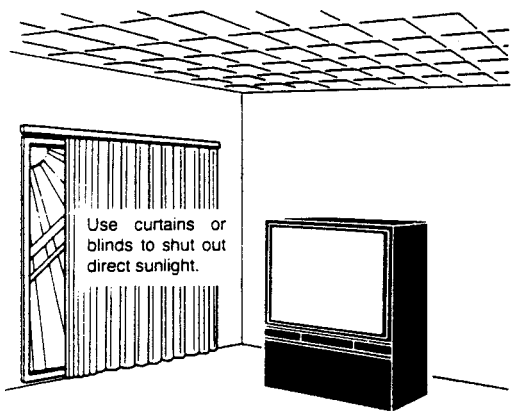
The Projection Monitor is designed to be placed on the floor or on a sturdy platform. The mounting surface should be flat and steady.

INSTALLATION PRECAUTIONS:

Place of Installation

- *When the Projection Monitor is operating, it is cooled by air-flow through ventilation holes in the rear and bottom. Therefore, avoid placing it in a location where the cooling air-flow is hindered (e.g. against a wall).*
- *Avoid places subject to extremely high temperatures or humidity, or to temperatures of 41 °F (5 °C) or lower. Also avoid dusty places.*
- *Do not set the Projection Monitor in an unstable location (such as on a shaky or tilted platform).*
- *When setting the Projection Monitor on a floor made of soft material, make sure that the floor is not damaged by the weight of the Projection Monitor.*
- *If the room temperature suddenly rises (or if the Projection Monitor is moved from a cool place to a hot place), condensation may form on the lenses, resulting in picture distortion or color fading. If this occurs, simply wait a while (with the POWER SWITCH on) and the condensation will disappear.*

Downward spot lights or fluorescent lights in an overhead "Honeycomb" prevent direct illumination of the screen.



Cover shiny surfaces (floor and walls) with non-reflective materials, (carpet, rugs, wallpaper, etc.).

OPERATING PRECAUTIONS

Keep away from magnetic fields

The picture may be distorted if strong magnetic fields are nearby. External speakers should be set at least 2 feet (60 cm) away from the Projection Monitor. Electric fans and other motor driven appliances and toys may also be sources of magnetism.

When moving the monitor

Pull out the plug and move the monitor carefully. Be particularly careful not to bump or scratch the screen. To avoid damage to the caster wheels you may need to lift the monitor when going over irregular surfaces.

Install in a flat, steady place

Do not put the Projection Monitor on a surface that is tilted, unsteady or prone to shake or vibrate. A shaky or slanted platform is dangerous.

Adjust room illumination

Excessively bright or dim lighting may strain your eyes. Draw the curtains if necessary to shut out direct sunlight.

When not using the monitor for a long time

For safety, unplug the power cord when leaving the monitor turned off for a long period of time.

Condensation and picture blurring

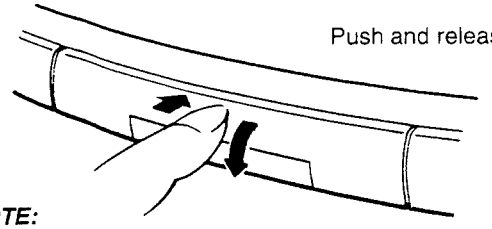
- You may see a blurred picture if the monitor is moved from a cool to a warm location or if room temperature rises very rapidly. This occurs when moisture from the air condenses on the optical parts.
- The picture will return to normal if you leave the monitor turned off for 1 of 2 hours, then turned on.
- A gradual change in temperature can prevent condensation from forming.

A word about still pictures

- Do not project a still picture on your Monitor for a long period of time.
  (For example: when using your Monitor for video games, monitoring your personal computer, or while playing back videodiscs.) This can adversely affect the monitor's CRT. If this cannot be avoided, reduce the contrast of the picture in order to minimize any damage which might occur.

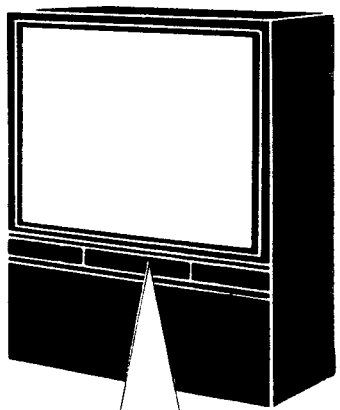
FRONT PANEL FACILITIES

A flip-down door conceals the control panel. Push gently and release to open the door.
To close the door, lift it back up into place.



NOTE:

- *If you accidntally pull the door, it may not shut properly. Push in ewhen shutting the door to setore it to normal operation.*



Control Panel

- Use the remote control unit to operate most functions (see pages 16 to 29).

①POWER switch and indicator
Press once to turn on the power. Press again to turn the power off. The POWER indicator lights up whne the power is on.

②CHANNEL buttons
Press plus (+) or minus (–) to tune to a higher or lower channel. Only those channels in tuner preset can be tuned in by this method. For details, see page 33.

③VOLUME buttons
Press the plus (+) or minus (–) button to raise or lower the volume.

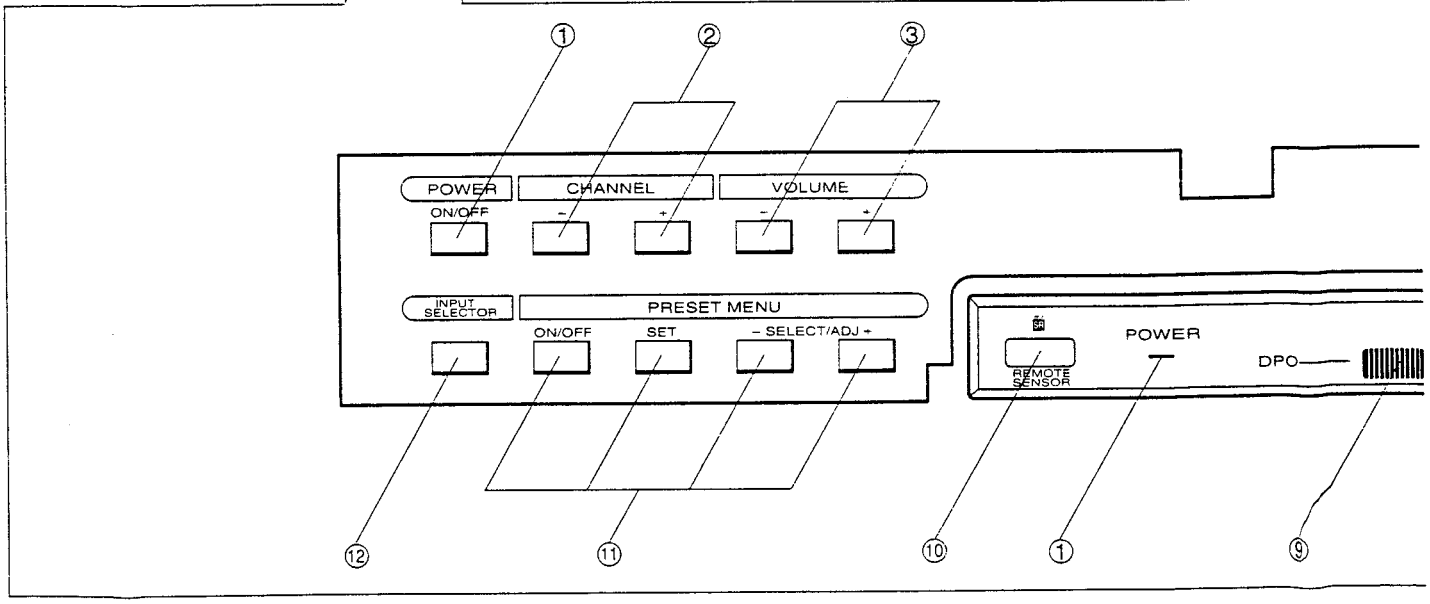
④STD/AV MEM (Standard/AV Memory) button
Press to switch between the standard (STD) picture/sound settings and the AV MEMORY 1 and AV MEMORY 2 settings which have been input with the MENU SET button.

⑤DIGITAL P IN P (Picture-in-Picture) buttons
ON/OFF: Press to turn the Picture-in-Picture function on and off.
INPUT: Press to select the input source for the sub-picture while in one sub-picture mode.

- For details on the Picture-in-Picture function, rsee page 22.

NOTES:

- *If only the S-VIDEO LD and VIDEO jacks of the LD player and/or VCR are connected to the Projection Monitor, the Picture-in-Picture function will not operate when these buttons are pressed.*
- *When the P IN P ON/OFF button is pressed and held for more than 2 seconds. The Projection Monitor will go into its demonstration mode. "P IN P DEMONSTRATION" will appear on the screen while Picture-in-Picture and DOLBY PRO LOGIC demonstration mode are engaged.*



Attention

The Projection Monitor Receiver will not function properly in the following cases:

- Lightning storms.
- High static electricity environment.
- Poor voltage regulation in the power source.

If the Projection Monitor does not operate properly, reset it as follows.

① Unplug from the power supply for approximately 1 minute.
② Plug the power cord in again to reset it.

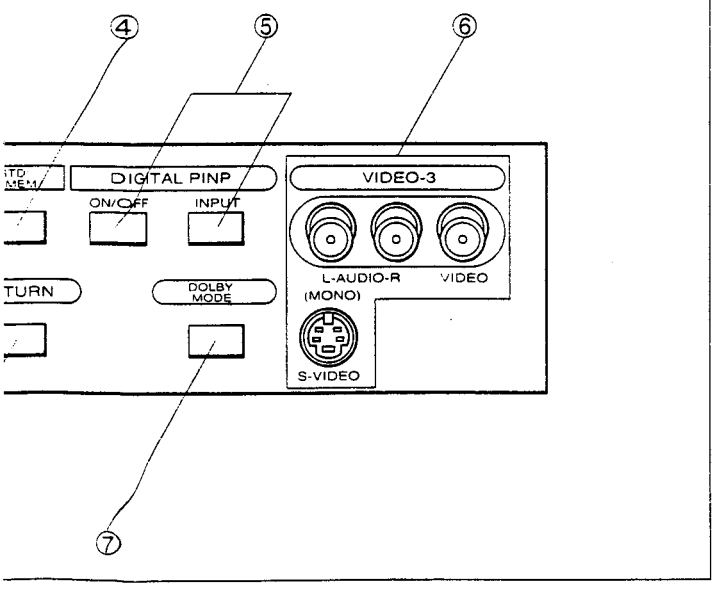
• The Picture-in-Picture and DOLBY PRO LOGIC demonstration mode will be cancelled if any other operation key or operation button is pressed; and the Projection Monitor will enter the selected operation mode.

⑥INPUT jacks (VIDEO-3)
These front panel jacks are convenient for connecting portable VCR, a video camera recorder or other temporary video source to the monitor. When the audio signal of the source to be connected is monaural, connect the L (MONO) jack.
Use the S-VIDEO jack when connecting an S-VHS or ED Beta VCR, or an LD player which has an S-output jack.

⑦DOLBY MODE button
Press to select Dolby surround mode as desired according to the video source and speaker system positioning. For details, see pages 13 and 20.

⑧RETURN button
Press to set the Projection Monitor to its initial mode instantly if either sound or picture disappear from the speaker system or the screen during adjustment.
• Adjust the Projection Monitor again after pressing the RETURN button, as all settings have been cleared.

When the RETURN button is pressed, the Projection Monitor is set as follows:
PICTURE: CONT; Set to 25, other parameters: set to 0.
SOUND: Set to standard.
VOLUME: Remains at the last setting.
DOLBY PRO LOGIC/ DOLBY 3CH LOGIC/ S.STEREO/ DPO/ P-in-P/ VNR: Set to OFF.



INPUT SELECTOR: Set to TV.
TV CHANNEL: Remains at the last channel set.

⑨DPO sensor
This sensor detects ambient lighting for the DPO (Dynamic Picture Optimizer) circuit which optimizes the TV picture accordingly.

⑩REMOTE sensor
This sensor picks up infrared signals from the remote control unit.

⑪PRESET MENU buttons
These buttons are used to perform the following functions: color convergence, tuner presetting, TV-CATV selection, relabeling input label, system mode setting and AV memory storage. For details, refer to the description of each function.
ON/OFF: Press to turn the Menu (functions above) on and off. When the button is pressed on, the function names CONVERGENCE, AV MEMORY, DPO BASE, INPUT LABEL, TV-CATV MODE, TUNER PRESET and SYSTEM MODE are displayed on the screen.
SELECT/ADJ (+/–): Press to select the desired function. The selected function is displayed in red.
SET: Press to activate the selected function.
NOTE:
• When the ON/OFF button is pressed and held for more than 2 seconds, the linear white system will be turned off and "LINEAR WHITE OFF" will appear on the screen. The linear white system will resume operation approx. 4 seconds after the ON/OFF button is released.
NOTE:
• Refer to page 43, if you wish to use the SYSTEM MODE function.

⑫INPUT SELECTOR button
Press to select your program source: TV, LD player, VIDEO 1, VIDEO 2 or VIDEO 3. Each press of the button changes the selection to the next source.

NOTE:
• On rare occasions, an electrical discharge may occur inside the CRT. It makes a short, sharp pop and either no sound is produced or the volume level changes by itself. The Picture-in-Picture function will be cancelled automatically if an electrical discharge occurs when this function is engaged. However, DOLBY SURROUND, STUDIUM/SS, DPO, VNR resume automatically when an electrical discharge occurs.

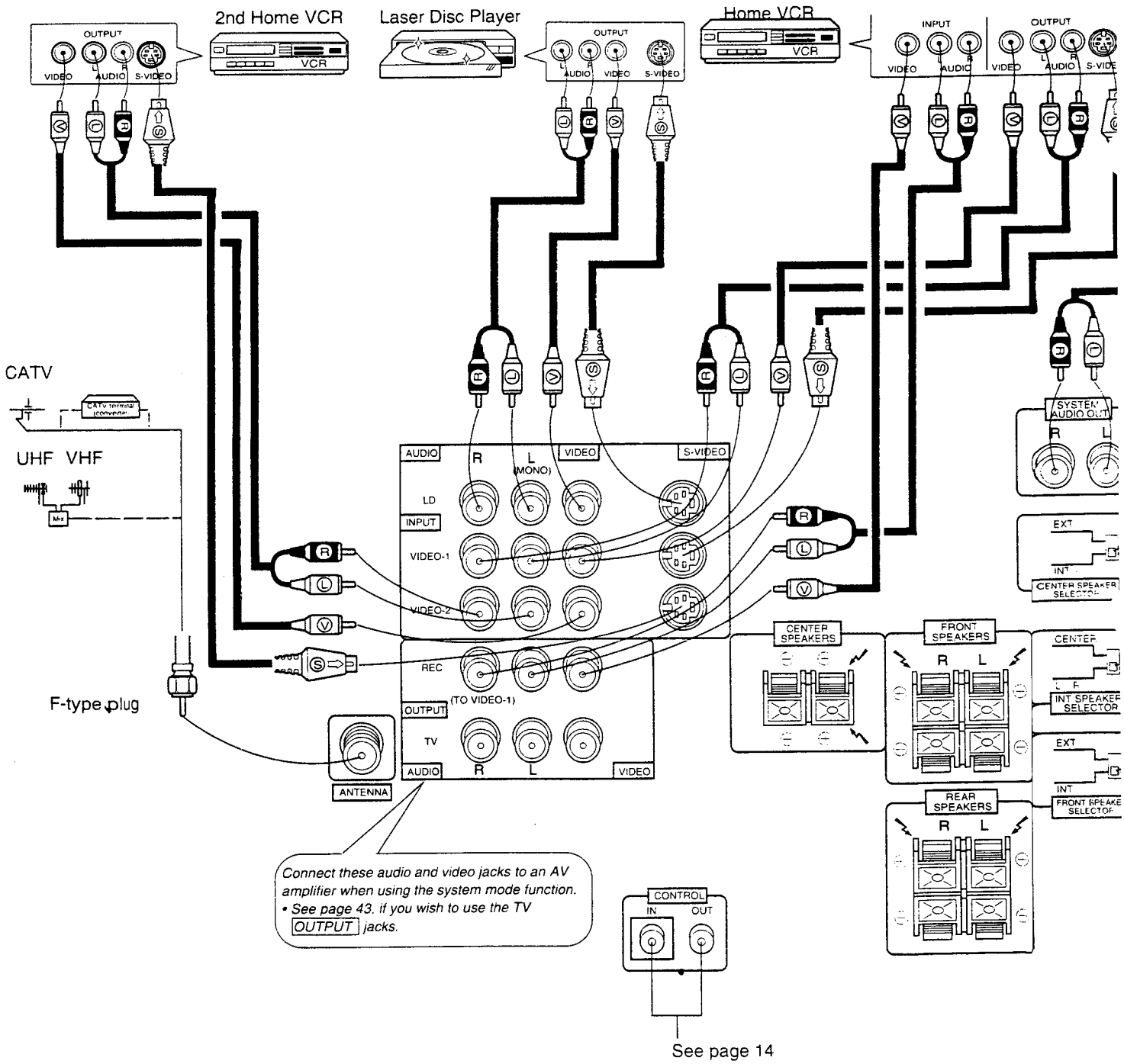
SYSTEM CONNECTION DIAGRAM

Refer to the instructions for your VCR, LD Player and other components for details concerning connections.
Turn off all components before making connections.

INPUT jacks
These are 4 sets of inputs for VCRs, LD Players and other video sources. Use RCA-type pin plug cords (the same as those used in hi-fi systems) for connections. When the audio source to be connected is monaural, connect the source to the L-(MONO) jack.

NOTE:

- *These video input jacks will be cut automatically when connecting both RCA-type pin plug cords and S-VIDEO cords at the same time.*



See page 14

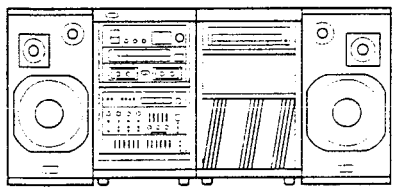
S-VIDEO INPUT jacks

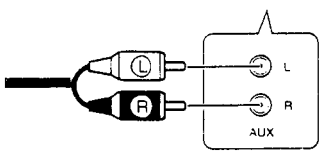
Use the S-VIDEO VIDEO jacks (VIDEO-1 to 3) to input S-VHS or ED Beta VCR video signals.
Use the S-VIDEO LD jack to input signals from an LD Player which has an S-output jacks.

NOTE:

When making S-VIDEO connections for either a VCR or an LD Player, be sure to keep the standard VIDEO and AUDIO pin plug cords connected between the VCR/LD Player and the Projection Monitor. If only the S-VIDEO LD and VIDEO jacks are used connected, the Picture-in-Picture function cannot be used.

Stereo system

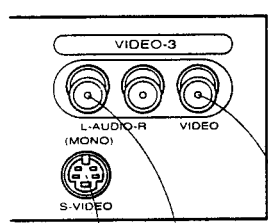




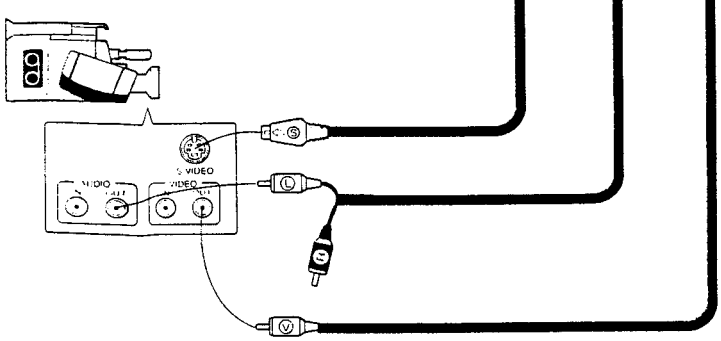
AUX input terminal

See page 13

Control panel



TV camera, etc.



OUTPUT TO VIDEO-1 REC-jacks

These are used for connecting the monitor to a VCR for recording, or for linking it to another monitor. These jacks output the video and audio signals of the source currently selected by the INPUT SELECTOR. Connect these output jacks to your VCR's inputs. Connect the VCR's outputs to the monitor's VIDEO-1 inputs. Connect the VCR's outputs to the monitor's VIDEO-1 inputs if you have the VCR.

ATTENTION

- *If a VCR is connected to the VIDEO-2 inputs, then that VCR should not be connected to these outputs. The design of some VCRs causes an oscillation feedback loop in such situations.*

CONTROL IN/OUT jacks

This jack is used to extend remote control to other PIONEER equipment bearing the SR (System Remote) mark. Use mono miniplug cords (available at audio and video shops) to connect the monitor's CONTROL OUT jack to the CONTROL IN jack of the other component. The other component can be connected to still another in the same manner, from the CONTROL OUT jack of one to the CONTROL IN jack of the other. If a component has only a CONTROL IN jack then put that component last in the sequence. Otherwise, you may connect then in any order that is convenient. If another component has the SR mark and its own remote control sensor, then the CONTROL OUT/IN jack connection is not required. However, this connection may improve the response of remote control, since you will not need to point the remote control unit at different components (see page 14).

NOTE:

The Projection Monitor's remote sensor does not function when a plug is inserted in the IN jack.

SYSTEM AUDIO OUT jacks

These jacks output the audio signal from the video program material currently selected for viewing on the monitor. Connect these audio output jacks to the AUX input jacks of your stereo system. You can then use the remote control unit to adjust the volume.

NOTE:

- *Signals from these output jacks will be affected by AV memory, bass and treble tone adjustments using the STUDIAM/SS button, STD/AV MEM button, SOUND button, ADJUST ◄ and ► button as well as the Dolby Pro Logic SUrround function using the DOLBY MODE button.*

SPEAKER SELECTOR switches (CENTER SPEAKER /INT SPEAKER /FRONT SPEAKER)

These switches lets you select either the built-in speakers or external speakers and speaker system operation mode between center speaker system and normal left anf right channel speakers (see pages 12 and 13).

NOTE:

- *Set the FRONT SPEAKER switch to INT when using the built-in speakers. Do not use the INT setting if using speakers connected to the FRONT SPEAKERS terminals on the rear panel. When set to INT no sound is output from the front external speakers.*

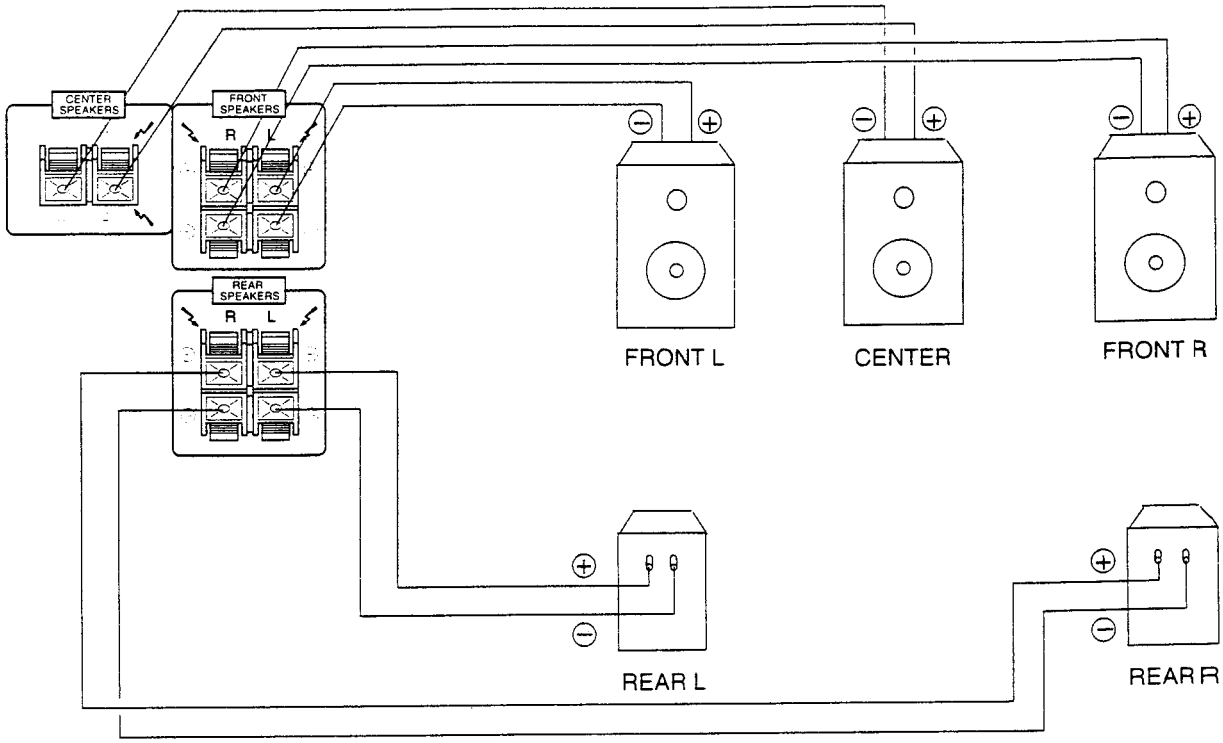
EXTERNAL SPEAKERS terminals (FRONT: L,R /REAR: L, R /CENTER)

For connection of external speakers (purchased separately), see pages 12 and 13.

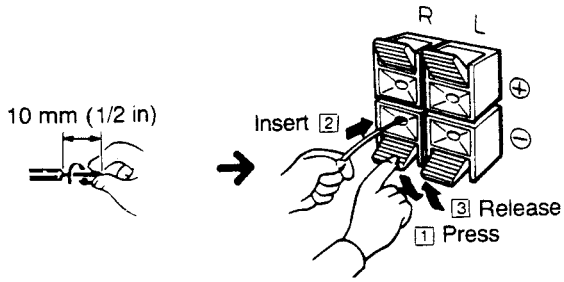
SYSTEM CONNECTION DIAGRAM

SPEAKER SYSTEM CONNECTIONS AND SELECTOR SWITCH SETTING FOR DOLBY PRO LOGIC SURROUND SYSTEM REPRODUCTION

CONNECTING EXTERNAL SPEAKER WIRES



CONNECTING EXTERNAL SPEAKER WIRES



Strip each wire so that about half an inch is exposed. Twist the core.

Turn off the power of the monitor and connected equipment. Press the lever, insert the wire, and release the lever to lock the wire into place. Pull gently on the wire to check that it is securely connected.

Do this for each wire. Be careful to connect the right speaker's plus and minus terminal wires to the "R", "+" and "–" terminals. Likewise, connect the left speaker's plus and minus terminal wires to the "L", "+" and "–" terminals.

Precautions

- Make sure that exposed wires do not protrude and touch each other.
- If you do not hear a normal stereo image when listening to a stereo program, it may be because the "+" and "–" connections are reversed for one of the external speakers.
- Make sure that the right speaker is connected to the "R" terminals and the left speaker to the "L" terminals. Make sure that each speaker's two wires are properly connected to the appropriate "+" and "–" terminals.

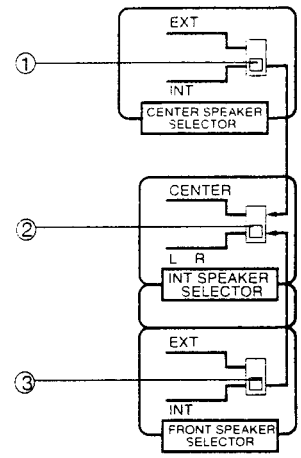
NOTES:

- *Use speakers with an impedance rating ranging from 8 ohms to 16 ohms.*
- *Ordinary speakers are not magnetically shielded and may disturb the picture if placed too close to the Projection monitor. If you notice a problem, move the speakers about 2 feet (60 cm) away from the Projection monitor.*
- *Make sure to connect both left and right rear speakers to the Projection Monitor. If no sound is produced, one of the speaker is not connected.*

HOW TO USE EXTERNAL SPEAKER SYSTEMS AND HOW TO SET THE SPEAKER SELECTOR SWITCHES

When using the Projection Monitor built-in speaker systems and external speaker systems for the surround reproduction.

Set the SPEAKER SELECTOR SWITCHES as follows:



Speaker system positioning	Speaker system use	SPEAKER SELECTOR switch setting		
		① CENTER SPEAKER SELECTOR	② INT SPEAKER SELECTOR	③ FRONT SPEAKER SELECTOR
Fig. -1	Use the built-in speaker systems for the front left and right channel speaker and the external speaker systems connected to the CENTER SPEAKERS terminals. • If all the speaker systems are connected to the Projection Monitor except the external center speaker, all the following SPEAKER SELECTOR switches must be set as indicated.	Set to EXT.	Set to LR.	Set to INT.
Fig. -2	Use the built-in speaker systems for the center channel speaker and the external speaker systems connected to the Left and Right FRONT SPEAKERS terminals.	Set to INT.	Set to CENTER.	Set to EXT.
Fig. -3	All the external speaker systems are connected to the CENTER, FRONT and REAR SPEAKER terminals of the Projection Monitor. And not use all the built-in speaker systems of the Projection Monitor. • If all the speaker systems are connected to the Projection Monitor except the external center speaker, all the following SPEAKER SELECTOR switches must be set as indicated.	Set to EXT.	– (Set to LR or CENTER.)	Set to EXT.

Fig. –1

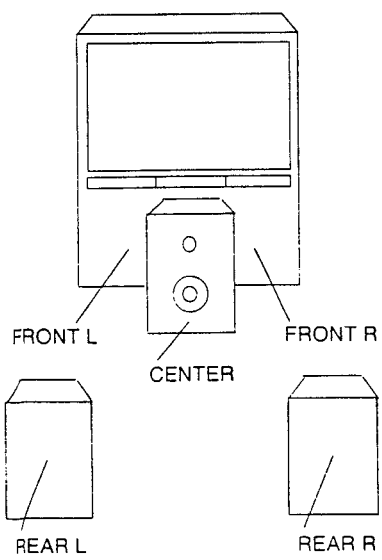


Fig. – 2

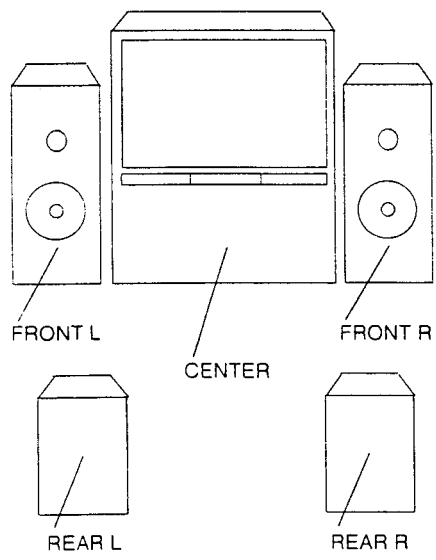
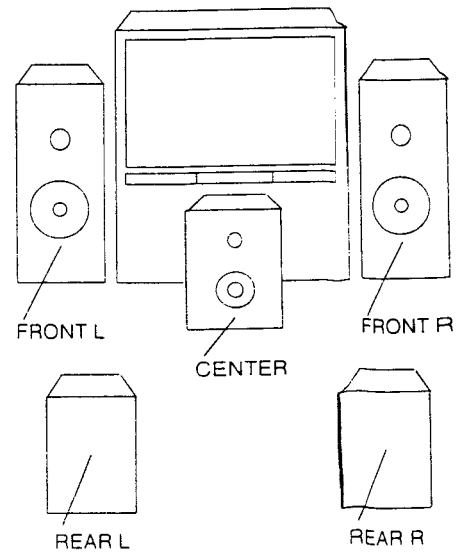
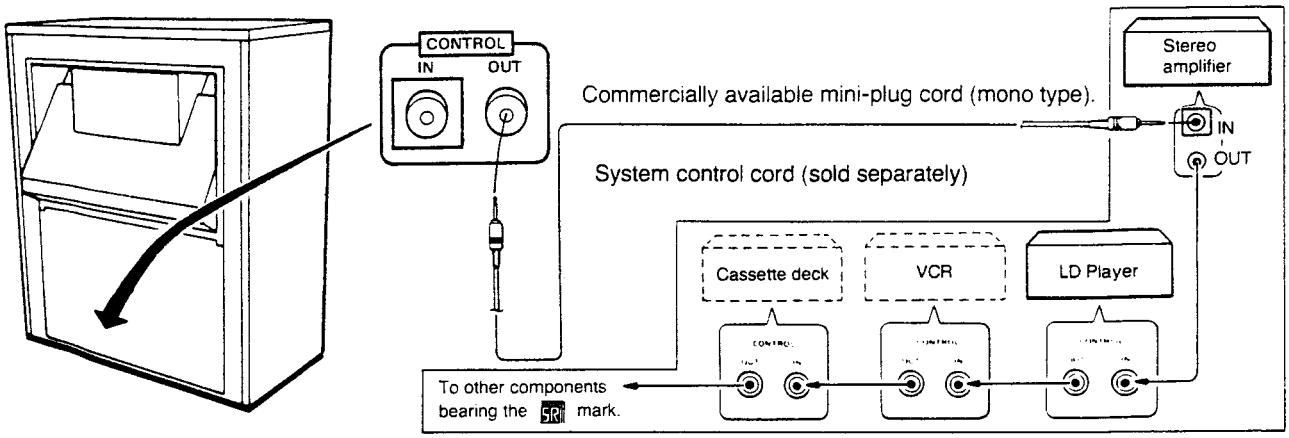


Fig. – 3



SYSTEM REMOTE CONTROL CONNECTIONS

Many PIONEER SR audio and video components can be connected to provide remote control for an entire audio/video system. Use mini-plug cords (monaural) which may be purchased in most audio and video stores. Connect from the CONTROL OUT jack of one component to the IN jack of the next component.



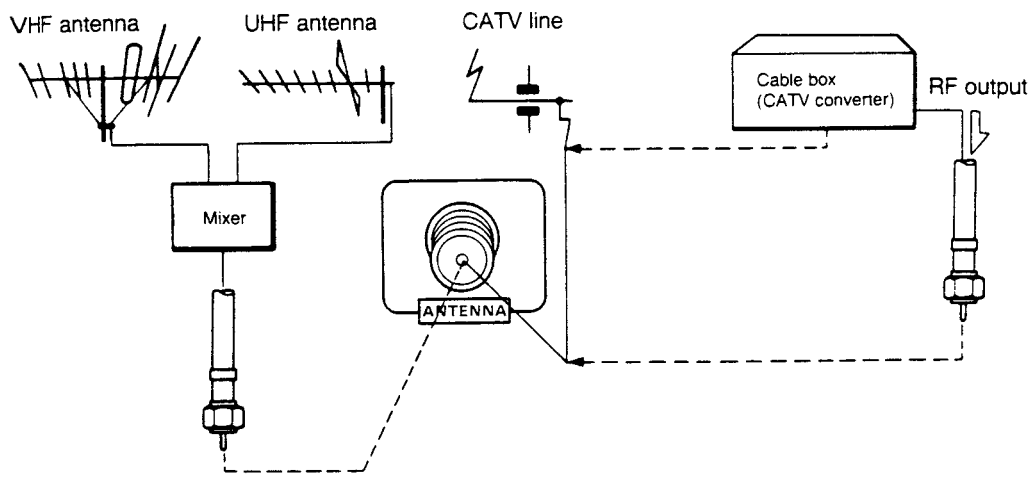
ANTENNA CONNECTIONS

A good color picture depends on a good TV signal. So does good multi-channel (stereo and SAP) sound. To ensure the highest signal quality, choose an antenna that suits your reception area and have it properly installed. Ask your dealer for advice.
If you subscribe to cable or have a central antenna for your building, then you will not need an external antenna. However, proper connections from the TV signal source to your monitor are essential. Please refer to the instructions below.

USING THE ANTENNA CABLE CONNECTOR

The cable connector plugs into the monitor's antenna terminal. This monitor is designed to be connected to a 75 ohm coaxial cable using an F-type plug.

Connect the cable box RF output cable or the antenna cable connector into the ANTENNA terminal.

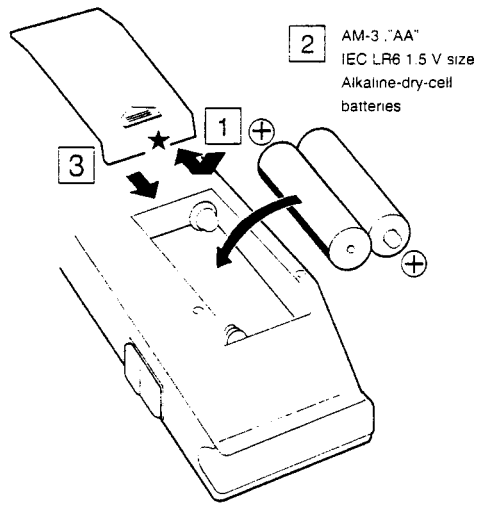


INSERTING BATTERIES IN THE REMOTE CONTROL UNIT

You will find the remote control unit packed inside the projection monitor box. Open the remote control unit and insert the batteries. Follow the procedure below:

1. Open the battery compartment on the rear of the remote control unit. Press down at the ★ mark with your thumb as shown in the illustration and pull the compartment cover open.
2. Note the polarity (+ and –) markings in the case. Insert the supplied batteries so that they match the markings.
3. Close the lid by sliding it back in until it clicks into place and press the RESET button located on inside of the top panel with the tip of a ballpoint pen. The remote control unit is now ready to use.

INSERTING BATTERIES



Battery Replacement

- If the TRANSMIT/LEARN indicator does not light normally, the batteries are low and should be replaced as soon as possible. Be sure to press the RESET button after the batteries are replaced and the battery compartment cover is closed. (Even when the RESET button is pressed, the programmed signals will not be erased.)
- Replace all batteries with new ones at the same time, but press the RESET button.

NOTE:

- *Insert the batteries whithin approx. 15 minutes. The programmed commands will be erased from the memory of the remote control unit for more than approx. 15 minutes if the batteries are not inserted.*

Incorrect use of batteries may lead to leakage or rupture.

Always be sure to follow these guidelines:

A.

Always insert batteries into the battery compartment correctly matching the positive + and negative – polarities, as indicated inside the compartment.

B.

Never mix new and used batteries.

C.

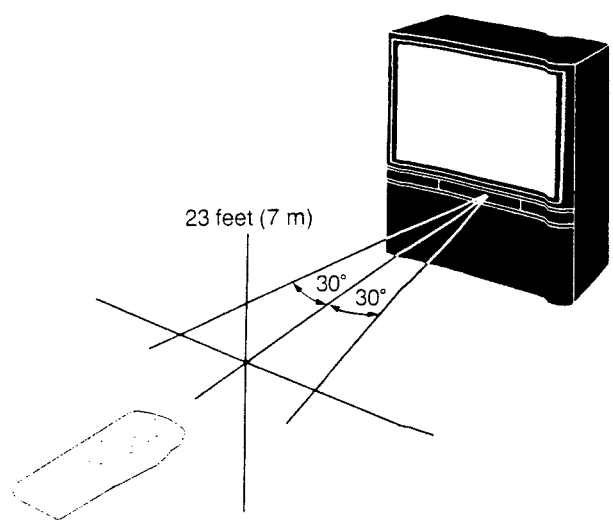
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

REMOTE CONTROL OPERATION RANGE

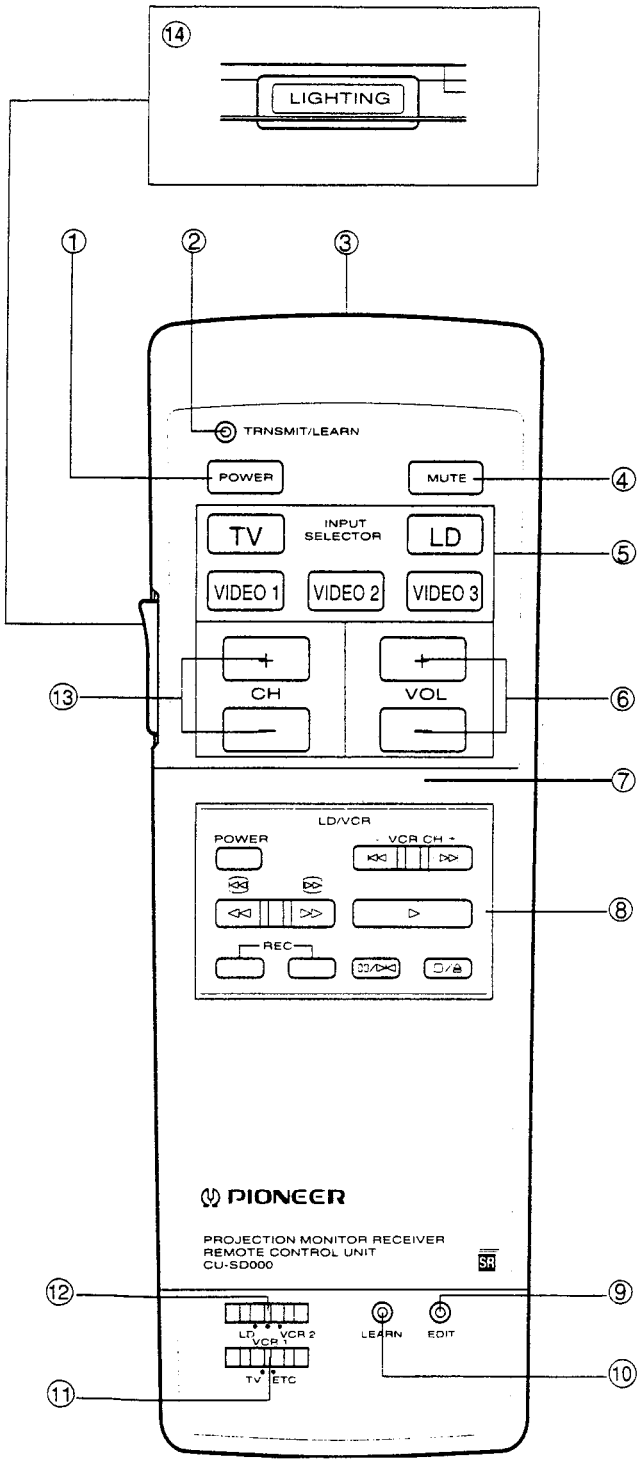
- Point the remote control unit toward the front of the Projection Monitor when you press any of the control keys.
- The remote control unit should be effective at distances of up to about 23 feet (7 m) from the Projection Monitor and at angles of up to about 30 degrees from a line perpendicular to the front panel.
- Furniture and other obstacles may block the infrared light beam so that it cannot reach the sensor on the Projection Monitor's front panel.
- If there is no response even when the remote control is used directly in front at the monitor, the dry cell batteries may need replacement.
- Performance of the remote control unit is adversely affected by strong fluorescent light. Keep such lights away from the sensor window in particular.

NOTE:

These figures are general and do not necessarily apply to programmed commands.



REMOTE CONTROL UNIT FACILITIES

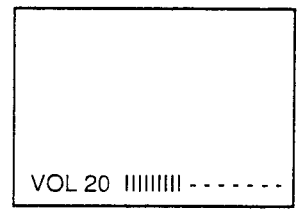


① POWER button
Turns the power of the monitor on and off.

② TRANSMIT/LEARN Indicator
Flashes when commands are being sent in one of meote control button is pressed.

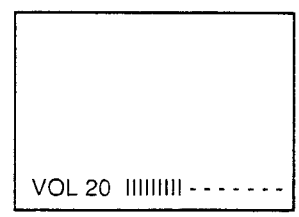
③Transmitting and Remote Control Code Receiver Window
Transmits remote control signals using infrared rays. When memorizing a remote control code, the window will function as an infrared receiver.

④ MUTE button
Press to temporarily turn off the sound. Press again to return to the previous volume level. This is useful, for example, when answering telephone.
The volume display will turn red while the mute funtion is engaged. If the mute function is left on for over appox. 10 minutes, the function will be cancelled automaticall, and the volume level will be reset to 0. The volume display will disappear from the screen when the mute function s cancelled.



⑤ INPUT SELECTOR buttons (TV/LD/VIDEO 1/VIDEO 2/ VIDEO 3)
Press the button to select the source you wish to wtch. The screen will display your selection.

⑥ VOL (Volume) +, – buttons
Press the + button to increase the volume, and the button to decrease it. Volume adjustment will appear on th screen as numbers and a bargraph. '63' indicates the maxmum volume level.
The display will disappear from the screen after 4 seconds.
* Volume display will change color automatically according to the selected input mode.



⑦ Top Panel

Operation buttons contained inside of the top panel for more atractive feature operations.

- After all operations are completed, make sure to close the top panel is securely closed.

⑧ LD/VCR Control buttons

If your LD Player or VCR (Video Cassette Recorder) is a PIONEER model bearing the mark, you can control the component using these buttons. For details, see page 29.

- When using these control buttons, the TRANSMIT MODE switch is selcted to LD, VCR 1 or VCR 2.

⑨ EDIT button

Press to set the preset code setting mode by setting TRANSMIT mode switch to LD, VCR 1 or VCR 2 (See page 26).

⑩ LEARN button

This setting activates the capability of the unit to "learn" and store command codes from other remote control units.

⑪ TV/ETC switch

Set to the position that corresponds to the component you wish to use between Projection Monitor and other LD player or video cassette recorder using commands programmed in the remote control unit.

TV: To send remote control code commands to Pioneer marked models.

ETC: To send command to a programmed command.

⑫ TRANSMIT MODE switch

Set to the position that corresponds to the component you wish to operate.

LD: To control the LD Player.

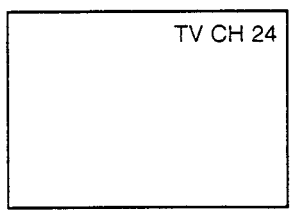
VCR1: To send commands to VCR 1.

VCR2: No commands are presetted.

- If you wish to use LD/VCR control buttons for VCR2 remote control, store command codes from other remote control units to the LD/VCR control buttons. For details, see pages 24 and 28.

⑬ CH (Channel) +, – buttons

Press the + or – button to scan up or down among the channels in tuner preset.



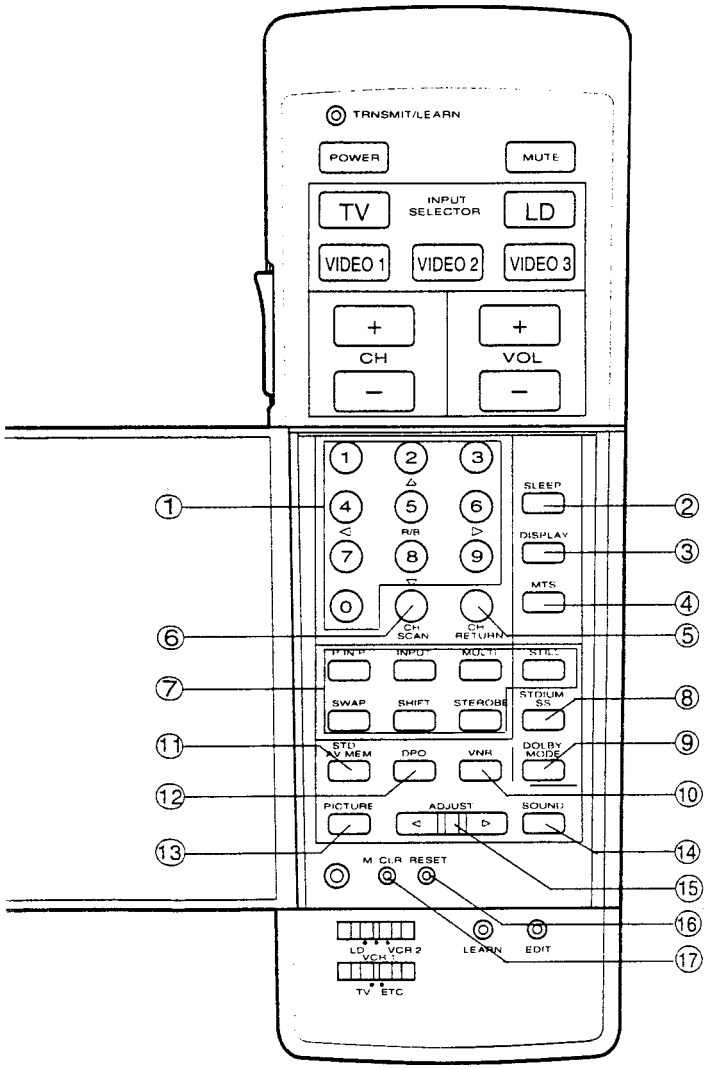
⑭ LIGHTING button

Press the INPUT SELECTOR (TV/ LD/ VIDEO1/ VIDEO 2/ VIDEO 3), VOL (+/–) and CH (+/–) button lights on.
The lights go off automatically several seconds after the button is pressed.

- If the light becomes dimmer or operating distance of the remote control becomes shorter, the dry cell batteries may need to be replaced.
- If you press the LIGHTING button repeatedly, inserted batteries life will become shorter.

REMOTE CONTROL UNIT FACILITIES

Inside of the top panel



Caution:
Open the top panel while pressing the top right hand corner of the top panel.
If the top panel is removed, attach it into place.

① Direct Channel Selection/Color Convergence buttons
Press the button (or buttons) that correspond to the channel that you wish to watch, to switch directly to that channel from any other channel.
The ②, ④, ⑤, ⑥ and ⑧ buttons are also used for color convergence operation. For details, see page 30.

② SLEEP button
Press to set the sleep timer.
The switching sequence is 90, 60, 30 (in minutes) and OFF (cancel). The screen will confirm your setting and the projection monitor will shut down when that amount of time has elapsed.
While the timer is working, the auto-off facility will not function.
The POWER OFF display will appear on the screen approximately 1 minute before turning off the power. The POWER OFF display will flash alternately red and black until the power is turned off.

→ **SLEEP OFF** → SLEEP 90 → SLEEP 60 →
SLEEP 30 ←

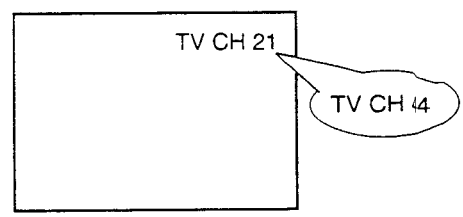
Each time the SLEEP button is pressed, the sleep time decreases in intervals of 30 minutes OFF → 90 → 60 → 30.
When the SLEEP button is held down, the sleep time decreases in one minute intervals. For example, to set sleep time to 40 minutes: Press the SLEEP button twice ('90' is displayed).
Press the SLEEP button again and hold it ('60' is displayed briefly, then the display decreases in 1 minute intervals: 59, 58, 57, ... etc.).
Release the SLEEP button when the display reads '40'.

③ DISPLAY button
Press once to display the current channel and/or other information on the screen.

④ MTS (Multi-channel TV Sound) button
Press to select the reception mode for multi-channel TV.

→ MAIN → SAP → MAIN/SAP → MONO →

⑤ CH RETURN (Channel return) button
Press to switch between the current channel and the channel you were watching immediately before. This is useful, for example, if you wish to switch back and forth between two sporting events.



⑥CH SCAN (Channel scan) button

Press to display 4 (or 9) memorized TV stations on the split screen at the same time. After pressing the CH SCAN button, use the MULTI button to select 4 station display mode or 9 station display mode.

Channel Scan Features

When 4 screen or 9 screen mode is selected, use this feature to select one of the television stations currently displayed for full-screen viewing.

Press the direct channel selection buttons that correspond to the channel that you wish to watch.

NOTE:

Non broadcasting station channel or no transmission service. In the case, transmission from the broadcasting station has stopped or you have selected a channel without broadcasting station, either a noise screen or the transmission of the last station received will appear on the screen, when channel scan feature are engaged.

⑦ Picture-in-Picture Control buttons

Any program source connected to the Projection Monitor can be displayed on the screen simultaneously with any other source. Also, the multiscreen mode (4 sub screen or 9 sub screen) can be selected.

P IN P: Press to turn the Picture-in-Picture function on and off.

INPUT: Press to select the input source for the sub-picture while in one sub-picture mode.

MULTI: Press to select the number of sub-pictures which appear on the screen (1,4 or 9).

SWAP: When only one sub-picture is displayed, press to exchange the position of the main picture and sub-picture.

SHIFT: Press to move the sub-picture to a different place on the screen.

STROBE: Press to select the strobe feature. Be sure to select the multiscreen mode (4 sub-screen or 9 sub-screen) using the MULTI button.

STILL: Press to select still screen or normal mode.

⑧ STADIUM/S.S. button

Press once to display the current channel and/or other information on the screen approx. 4 seconds.

The selected mode will be set to OFF when DOLBY PRO LOGIC or DOLBY 3CH LOGIC is selected and the DOLBY MODE button is pressed.

→ OFF → STADIUM → S.STEREO →

⑨ DOLBY MODE button

Press once to display the current channel and/or other information on the screen approx. 4 seconds.

The selected mode will be set to OFF when STUDIUM or S.STEREO is selected and the STUDIUM/S.S. button is pressed.

→ OFF → DOLBY PRO LOGIC →
DOLBY 3 CH LOGIC ←

⑩ VNR (Video Noise Reduction) button

You can turn VNR on or off as desired. When VNR is on, the noise on the screen is reduced. For details, see page 21.

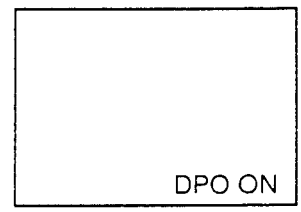
⑪ STD/AV MEM (Standard/AV Memory) button

Press to switch between the standard (STD) picture/sound quality settings and your AV MEMORY 1 and AV MEMORY 2 setting.

This button only recalls settings stored in AV MEMORY. To put the current picture/sound settings into AV MEMORY, use the control panel's PRESET MENU buttons. For details, see pages 36 and 37.

⑫ DPO (Dynamic Picture Optimizer) button

You can turn DPO on or off as desired. When DPO is on, it automatically adjusts the picture to compensate for room illumination. For details, see page 38.



⑬PICTURE button

Press to select the picture parameter to be adjusted.

⑭ SOUND button

Press to select the sound parameter to be adjusted.

→ BASS → TREBLE → BALANCE →

- Dolby surround adjustment menu will appear on the screen when DOLBY PRO LOGIC or 3-CH LOGIC surround is selected by pressing the SOUND button. If you want to adjust a sound parameter, set Dolby surround mode OFF before adjustment.

⑮ ADJUST button

Press the ► button to increase the value of the item currently selected using the PICTURE button or SOUND button, and the ◄ button to decrease it.

⑯RESET button

Press to reset the microcomputer in the remote control unit to its initial mode in the following cases:

- When replacing the batteries.
- If the remote control unit will not function properly when the operation key is pressed, etc.

NOTE:

On rare occasions, an electrical discharge may occur inside the unit, causing some command malfunction. If this happens pressing RESET should correct the problem. The possibility exists, however, that instead of correcting the problem, pressing RESET may erase the programmed memory.

⑰M. CLR button

Erases all commands programmed through the LEARN function; press lightly with the tip of a ballpoint pen or other fine-tipped instrument during learn mode to activate this function. For details, see page 25.

Caution:

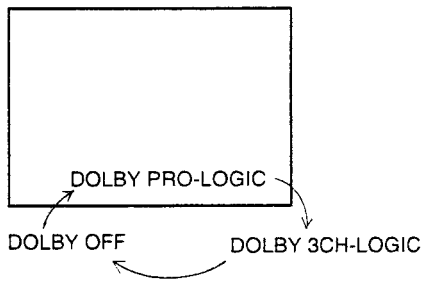
Do not press any operation button on the Projection Monitor or on the remote control unit while recording is in progress. Signals from the REC jacks may be interrupted shortly, when an operation button is pressed.

REMOTE CONTROL UNIT FACILITIES

DOLBY PRO LOGIC SURROUND AND DOLBY 3CH LOGIC

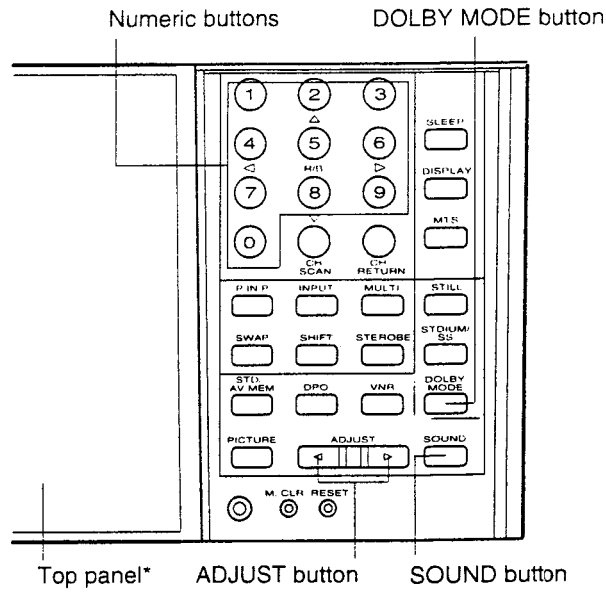
Connect external speaker systems to the Projection Monitor SPEAKERS terminals for Dolby surround reproduction and set the SPEAKER SELECTOR switches according to connected speaker systems. For more details, see page 13.
• If the SPEAKER SELECTOR switches are improperly set, no sound will be heard from the connected external speaker systems.

Press the DOLBY MODE button repeatedly to select the suitable mode of Dolby surround system for the best reproduction of the video source.



DOLBY SURROUND ADJUSTMENT

When the SOUND button is pressed, the following Dolby surround adjustment menu will appear on the screen during Dolby Pro Logic or Dolby 3CH Logic is selected.
You can adjust each item to select from the menu by pressing numeric buttons for your room and speaker system positioned condition accordingly.
Select adjustment item from the menu by pressing 1 to 6 or 0 numeric button on the remote control unit.
Then, press the ◄ or ► ADJUST button to adjust the selected item.
After all press 0 (zero) numeric button to exit the adjustment.



* Before operation, open the top panel. After all operations are completed, make sure that the top panel is securely closed.

NOTE:
If you wish to exit from the mode, press the numeric 0 (zero) button repeatedly still remaining the adjustment menu on the screen, otherwise the mode cannot be exit.

```
1 SURROUND LEVEL
2 BASS              0
3 TREBLE            0
4 CENTER MODE
5 TEST TONE
6 STANDARD
0 EXIT
PRESS NO. TO SELECT
```

• Adjustment menu when Dolby Pro Logic is selected

Selecting SURROUND LEVEL adjustment from the menu by pressing button 1.

```
1 CENTER            0
2 BALANCE           0
3 REAR              0
0 EXIT
PRESS NO. TO SELECT
```

Selecting CENTER MODE adjustment from the menu by pressing button 4.

```
1 NORMAL
2 WIDE
3 PHANTOM
0 EXIT
PRESS NO. TO SELECT
```

Selecting TEST TONE adjustment from the menu by pressing button 5.

```
1 CENTER            0
2 BALANCE           0
3 REAR              0
0 EXIT
PRESS NO. TO SELECT
```

• Adjustment menu when Dolby 3CH Logic is selected

Selecting SURROUND LEVEL adjustment from the menu by pressing button 1.

```
1 CENTER            0
2 BALANCE           0
3 REAR            OFF
0 EXIT
PRESS NO. TO SELECT
```

Selecting CENTER MODE adjustment from the menu by pressing button 4.

```
1 NORMAL
2 WIDE

0 EXIT
PRESS NO. TO SELECT
```

Selecting TESET TONE adjustment from the menu by pressing button 5.

```
1 CENTER            0
2 BALANCE           0
3 REAR            OFF
0 EXIT
PRESS NO. TO SELECT
```

REMOTE CONTROL UNIT FACILITIES

Stadium and Simulated Stereo effects

This monitor is equipped with the newly designed Stadium and Simulated Stereo sound effect system to reproduce a wider and more dynamic sound field for any video source including TV program. A monaural sound track can also be modified to produce stereo-like sound. Simulated stereo sound is included in this sound system.

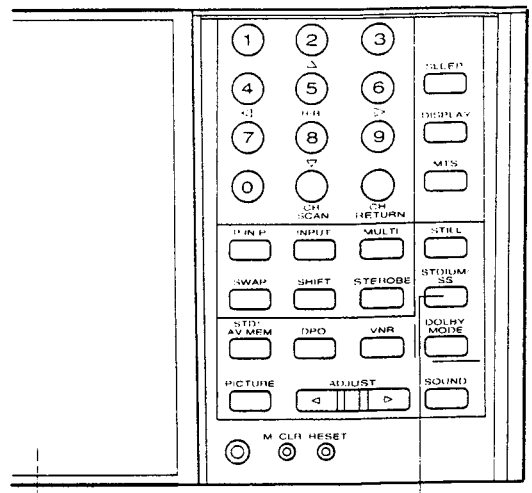
Press the STADIUM/S.S. button repeatedly to select the mode as follows:

STADIUM: Set to this mode while watching movies or sports programs.

S. STEREO (Simulated Stereo): Set to this mode while watching monaural sound programs.

NOTES:

- *The selected mode will appear on the screen for 4 seconds.*
- *Only the signals from the SYSTEM AUDIO OUT jacks will be altered when the either STADIUM or S.STEREO is selected.*
  The original output signal is sent through the other OUTPUT REC jacks.

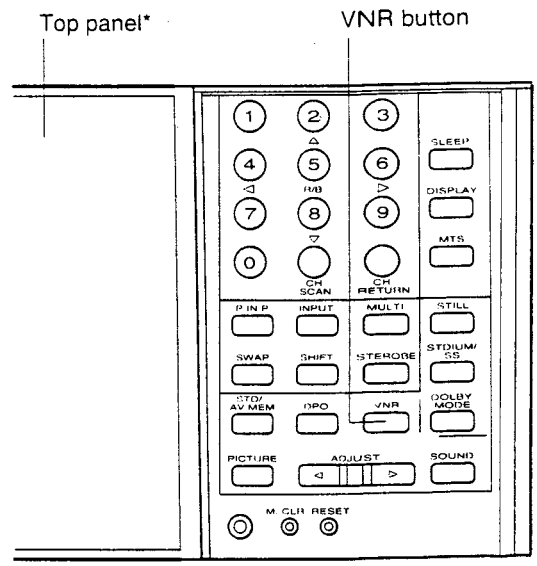


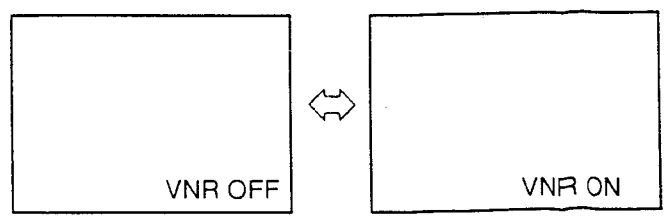
* Before operation, open the top panel. After all operations are completed, make sure that the top panel is securely closed.

VNR (Video Noise Reduction) system operation

To improve picture quality with VNR while watching a TV program or prerecorded video cassette tape playback

VNR system will reduce the noise contained in the video signal and improve the picture quality of TV programs or video tape playback pictures.
Press the button once to display the VNR mode (VNR ON or VNR OFF) on the screen, then press the button once or twice to select either VNR ON or VNR OFF.





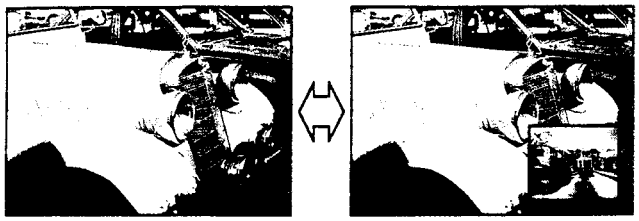
REMOTE CONTROL UNIT FACILITIES

Picture-in-Picture functions

Any one of the three sources connected to the Projection Monitor can be displayed simultaneously on a small area of the screen, while one of the other sources is being watched on the main screen.

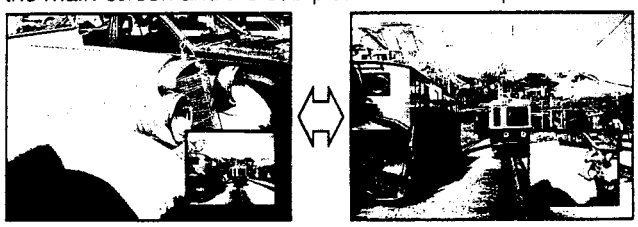
To turn the Picture-in-Picture function on and off

Press the P IN P button repeatedly to turn the sub-picture on and off.



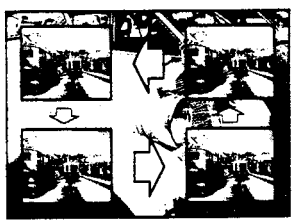
To replace the main screen picture with the sub-picture

Press the SWAP button. Each time this button is pressed, the main screen and the sub-picture will switch positions.



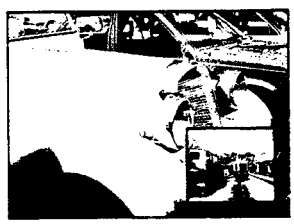
To change the position of the sub-picture

Press the SHIFT button repeatedly. Each time this button is pressed, the sub-picture will move (counterclockwise) to a different corner of the main screen.



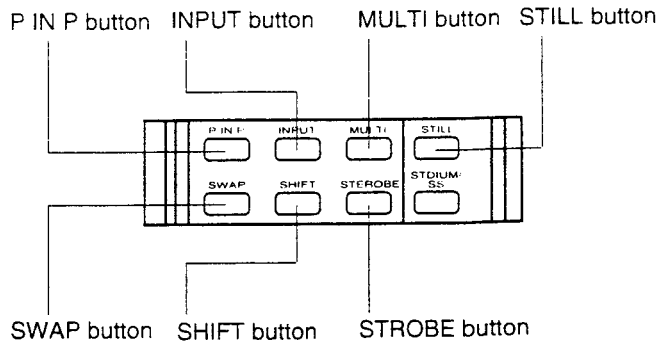
To select the input source of the sub-picture while watching the main screen

Press the TV, LD, VIDEO 1, VIDEO 2 or VIDEO 3 INPUT SELECTOR button. When the INPUT button on the remote control unit is pressed, the selected video source for the sub-picture will be displayed (ie, video disc playback, TV program or video cassette tape playback).



Sub-picture input display

If sub-picture input source is switched by INPUT button while in one sub-picture mode. The source will be displayed above (or below) the sub-picture. Press the DISPLAY button to display the input source of the main picture in the upper right hand corner of the screen. Sub-picture input source will appear in the lower left corner at the screen.



* Before operation, open the top panel. After all operations are compled, make sure that the top panel is securely closed.

To watch a still picture on the main screen

Press the STILL button to freeze the picture. The sound track will continue to play back normally, but the picture will freeze.

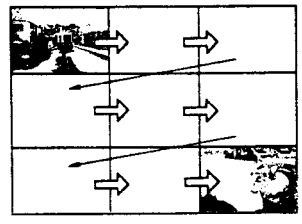
To cancel still or picture-in-picture function

Press the STILL button again. The screen will be reset to normal mode. Alternatively, press the P IN P button to cancel the picture-in-picture function.

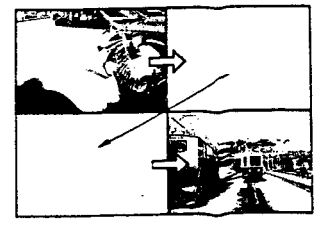
Picture-in-Picture function using the Multi-screen feature

The multi-screen feature can select 4 sub-picture mode or 9 sub-picture mode, and the strobe or manual features.

1. Press the P IN P button to turn the picture-in-picture function on.
2. Press the MULTI button repeatedly to select 1, 4 or 9 sub-pictures.
   When selecting 4 sub-picture or 9 sub-picture mode, the main screen will disappear and 4 or 9 sub-pictures will appear on the screen. The lower right hand corner of the screen plays back normally. If the 1 sub-picture mode is selected, the main screen will reappear.
3. Press the STROBE or SHIFT button.
   When the STROBE button is pressed, the picture will be displayed at specific intervals. At each interval, a still picture appears in one of the 4 (or 9) sub-pictures. The final screen picture plays back normally. Press the SHIFT button repeatedly if you wish to change the active sub-picture's position. The sub-picture selected most recently will play back normally.
4. To cancel the multi-picture feature:
   Press the MULTI button. The main and sub-screen will reappear. Alternatively, press the P IN P button to cancel the picture-in-picture function.



9 sub-picture mode



4 sub-picture mode

REMOTE CONTROL UNIT FACILITIES

To display the picture of several television stations using the channel scan feature

The channel scan feature can display 4 or 9 television station pictures at the same time. The stations which have been memorized in the TV tuner will be displayed on the split screen.

All the displayed pictures will appear as still images when the channel scan feature is engaged.

1. Press the TV INPUT SELECTOR button on the remote control unit or press the INPUT SELECTOR button on the Projection Monitor repeatedly until a TV program appears.
2. Press the CH SCAN button to display the first 4 stations on the screen. The memorized TV stations will appear in order from the top left corner to bottom right corner of the screen.
3. Press the MULTI button repeatedly to select 4- or 9-screen mode. The selected TV station will appear in the sub-screen in the upper left corner of the screen.
4. To display the next group of memorized TV stations:
   Press the CH SCAN button again.
   Press the CH SCAN button repeatedly to select the memorized stations you wish to watch.
5. To cancel the channel scan feature:
   Press the P IN P button again.

If you wish to select a station when the channel scan feature is engaged.

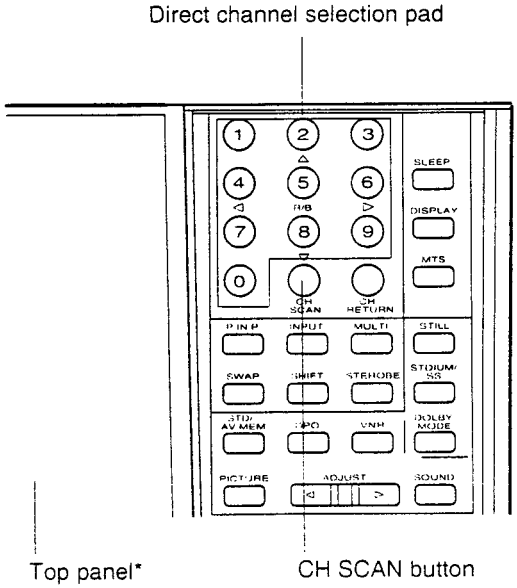
Press the direct channel selection pad you wish to select.

* Press the DISPLAY button to reappear channel numbers on the screen.

NOTE:

Non broadcasting station channel or no transmission service. In the case, transmission from the broadcasting station has stopped or you have selected a channel without broadcasting station, either a noise screen or the transmission of the last station received will appear on the screen, when channel scan feature are engaged.

Direct channel selection pad



Top panel* CH SCAN button

* Before operation, open the top panel. After all operations are completed, make sure that the top panel is securely closed.

Attention

Do not use the Picture-in-Picture function for more than 2 hours. It may damage the picture tubes inside the Projection Monitor. If you wish to this function for more than 2 hours, change the sub-picture position on the screen every once in a while by pressing the SHIFT button.

NOTES:

- *If only the S-VIDEO LD and VIDEO jacks are used to connect the LD player and VCR to the Projection Monitor, the Picture-in-Picture function will not operate when these buttons are pressed.*
- *The sound of the sub-picture(s) cannot be heard when the Picture-in-Picture system is engaged.*
- *When a copy-protected tape is played back in the main screen, the sub-picture may be distorted.*
- *With some VCRs, the screen may fluctuate, when the VCR is not in playback mode. This is not a malfunction.*
- *TV channels can be selected with the TV CHANNEL +/– button or the direct channel selection pad when the TV button of the INPUT SELECTOR is pressed. Both the main screen and the sub-picture will change TV channels at the same time when TV channels are selected.*
- *Signals output from the Projection Monitor will not be altered when the Picture-in-Picture function is engaged. Only the main picture signal is sent through the monitor output jacks.*
- *The picture-in-picture function will be cancelled automatically if none of buttons are pressed for more than 8 minutes when still mode, multi-mode or channel scan mode is engaged.*
- *If the input signal (including burst signal) is not supplied to the main screen, the picture-in-picture function will not function properly.*
- *During still playback, special effect playback, or when searching an LD or video cassette tape visually forward or backward using the main screen, shaking may occur in the sub-picture.*
- *After the multi-screen feature is engaged, input to the sub-screen cannot be changed by pressing the INPUT button. If you wish to change the input, press the MULTI button to cancel the multi-screen mode or select one sub-picture mode, and select the desired input source of main. Then select the multi-screen feature again.*
- *While P in P function is on, if main screen signal is cut, sub-picture may disappear.*
  If main screen signal is supplied again, the original mode will be restored. Pictures appear on both the main screen and sub-picture when the main screen signal is supplied.
- *If no TV program is received or picture is not clear, black and white picture will appear in the sub-picture when the CH SCAN button is pressed. If this happens, select a TV program tuned in clearly, then press the CH SCAN button.*
- *Channel scan feature can display only memorized TV stations which can be tuned using the TV tuner of the monitor.*
  If the RF terminal of the CATV converter is connected to the monitor, channel scan feature can display CATV converter selected station only, not all the stations memorized in the CATV converter.

REMOTE CONTROL UNIT FACILITIES

This remote control unit can "learn" the commands of other remote control units, regardless of their manufacturer, as long as the other unit is of the infrared type. In some cases you may still need the original remote control unit, but you will be able to use this unit for most of your video as well as audio system control needs.

NOTE:

It is advisable to program the unit in a room separate from the system with which it is to be used. This will prevent problems such as sudden high-volume output or accidental tape erasure that may occur if command signals reach your components during programming. Or, you may wish to unplug your component system and conduct programming in the same room. Simply turning off the power may not be sufficient since power on/off switching may also be remote controllable. Also do not throw away the original remote control units after programming. You might need the original ones in the future.

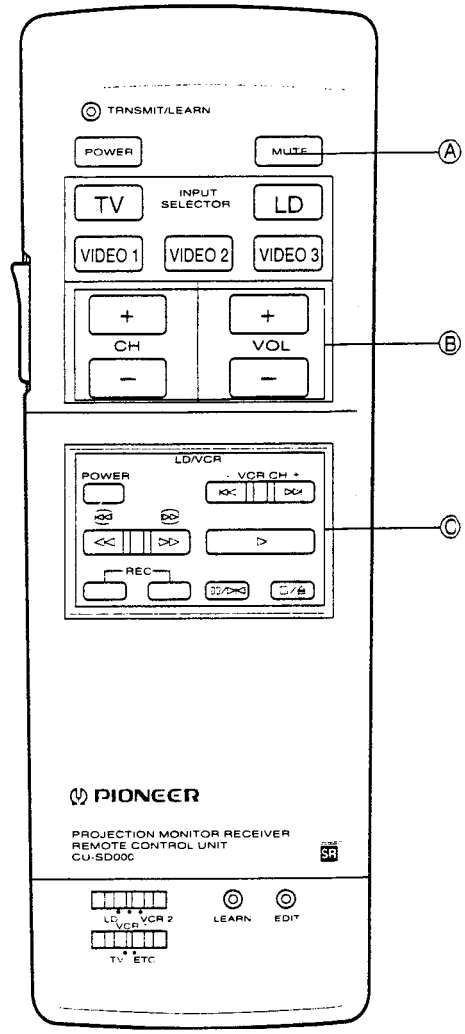
This remote control unit contains preprogrammed commands compatible with PIONEER equipment. If your home audio/video center consists exclusively of PIONEER components, you can use the unit without any additional programming. It is also possible to return to the original PIONEER commands after assigning other commands. (Refer to "Returning to the Initial Settings" for details.)

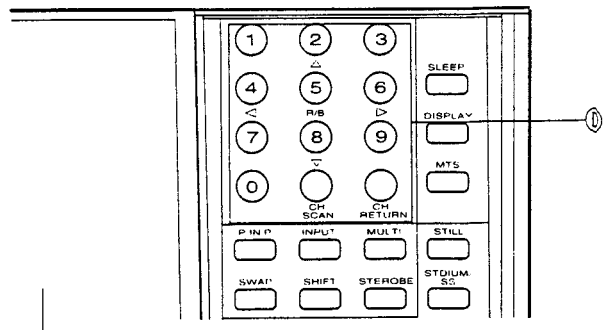
Which buttons can be programmed with new commands?

In areas Ⓐ, Ⓑ, Ⓒ and Ⓓ, the buttons can be programmed with a different command from another remote. In area Ⓒ, three set of commands can be programmed by selecting the TRANSMIT MODE switch.

Other Important Notes

- A total of 15 to 25 other codes can be memorized using these buttons. (This may vary depending on the command format of the codes to be memorized.)
- There are 2 buttons on the unit for recording, to help prevent misoperation. To start recording, or to memorize a command code with the REC buttons, both of them must be pressed at the same time.
- When the batteries run down, all functions will stop automatically. If the indicators no longer light or flash, or components do not respond to signals from the unit, the batteries need to be replaced. (Always use alkaline cells.)
- When programming buttons, make sure that both units are loaded with fresh batteries.
- Programming may be impossible from some types of infrared remote control units.





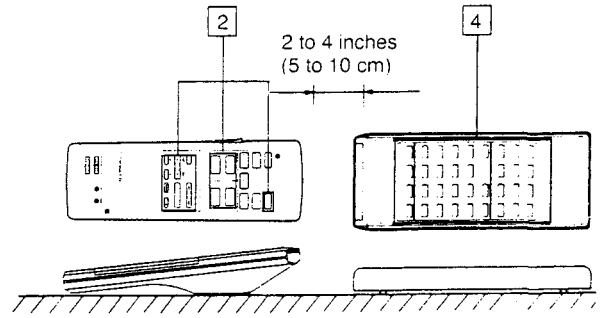
Top panel*

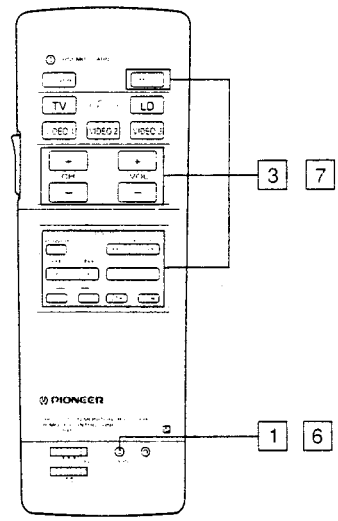
REMOTE CONTROL UNIT FACILITIES

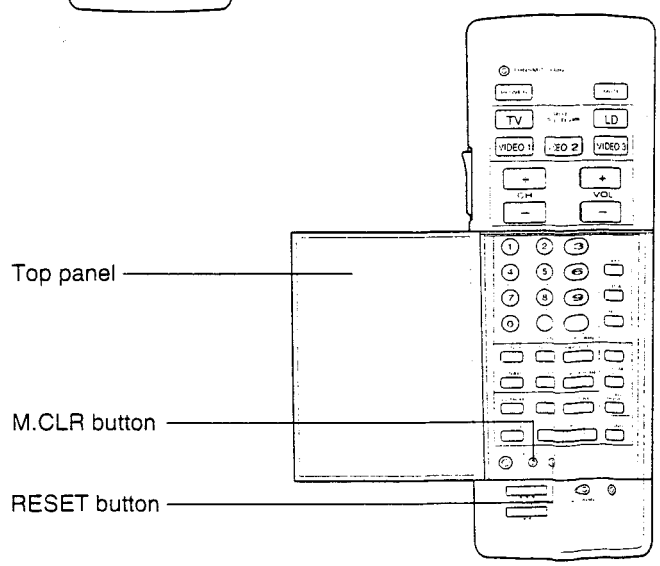
How to program the remote control buttons

Select the TRANSMIT MODE switch when programming the remote control buttons as shown in the illustration on page 24 (area Ⓒ). Set the TV/ETC switch to ETC when programming the remote control buttons as shown in the illustration on page 24 (areas Ⓐ, Ⓑ or Ⓓ).

1. Press the LEARN button.
   • TRANSMIT/LEARN indicator will flash on and off.
2. Place the other remote control unit and the programmable remote control unit on a table facing each other, separated by a distance of 2 to 4 inches (5 to 10 cm). Be sure to place the remotes on a stable surface such as a table while doing this.
3. Press the button on the programmable remote control unit that you wish to program until the TRANSMIT/LEARN indicator goes off (approx. 1 second), and lights up.
4. Press a button on the other remote control unit until the TRANSMIT/LEARN indicator goes off (approx. 0.5 seconds), then flashes on an d off.
5. To program other buttons, repeat steps 3 and 4.
6. When finished, press the LEARN button.
7. Point the programmable remote control unit toward the corresponding component and check operation by pressing the buttons you just finished programming. If the component does not work as expected, repeat steps 1 to 7. Proceed to note 1, then repaet the above procedure.







NOTE:

- *When programming, make sure that function indicators (e.g., ►, ►►, ■ ≙) are programmed from the original remote control unit into the matching keys of the programmable unit; this will greatly facilitate operation.*
- *Do not press the buttons excessively while performing programming operations.*
- *If the TRANSMIT/LEARN indicator flashes twice, it indicates an error has occured (Repeat the above procedure 1 thorugh 7).*
  If the TRANSMIT/LEARN indicator flashes four times, it indicates either that an error has occured or that the remote control unit's programming capacity has been exceeded. Repeat the above procedure (1 through 7). In the later case, the function last programmed will not be stored correctly. All previously programmed functions, however will be retained in the memory and may be used as they are if the last function is not essential.
  For re-programming information, refer to "Returning to the Initial Settings."

1. *If programming is not carried out successfully:*
   - *Position the remote control units at a greater distance from each other.*
   - *Position the remote control units slightly out of line with each other.*
   - *Position the two remote control units, so that their transmitting windows face each other.*
2. *If the remote control unit is directly subjected to strong fluorescent light, programming may not be possible.*
3. *If remote control operation is not successful although programming was successful:*
   - *Press the RESET button. (The programmed signals will not be erased.)*
   - *Replace all the used batteries at once.*

If the memory becomes full even when you have used only a samll number of buttons for learning, take the followin g operation

• Check buttons already used for learning

If the TRANSMIT/LEARN indicator remains lit after you have quickly pressed and released a button used for learning, memorization in that button is incorrect, resulting in the memory full condition. If you perform learning once more, abnormal data is cleared, returning you to normal conditions.

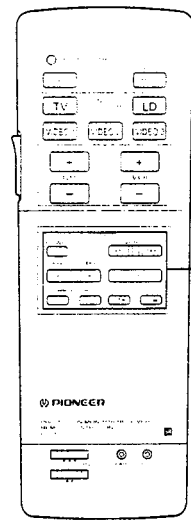
REMOTE CONTROL UNIT FACILITIES

Editing preset remote control function

To recall a preset remote control signal (For VCR 1, 2 and LD) some kinds of remote control signal formats are already preset for basic LD player and VCR functions. If they conform with your LD player or VCR functions, you can automatically preset operation buttons with the desired format's remote control signals and use them to command operations. It is not necessary to learn operation one at a time. The following operation buttons can be preset to remote control signal format.
For details, see page 29.

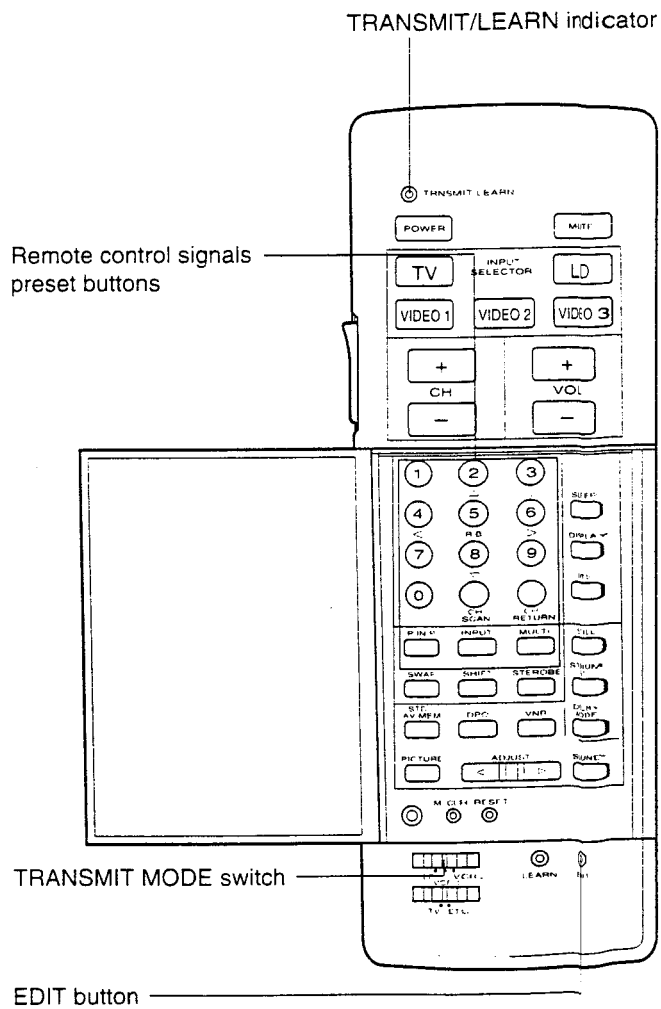
NOTE:

- *If there is a remote control operation button for a function your LD player or VCR does not have, operation is not possible.*



How to preset a remote control signal format

1. Select a preset mode LD player or VCR by setting the TRANSMIT MODE switch to LD, VCR1 or VCR2.
   - If you want to preset a LD player remote control signal format, set the switch to LD, for example.
2. Press the EDIT button to set the remote control mode to edit mode. The TRANSMIT/LEARN indicator will start flashing on and off.
   To cancel the edit mode, press the EDIT button again.
3. Select a preset remote control signal format by pressing 0, 1 to 9 numeric buttons, CH SCAN, CH RETURN, P IN P, INPUT or MULTI buttons.
   - Refer to the chart (page 27) before presetting a remote control signal format according to your used LD player or VCRs.
   - After one button is pressed, the LEARN/TRANSMIT indicator stay lit approximately one second. Remote control signal format preset is completed.
4. If the other remote control signal format is preset, set the TRANSMIT MODE switch to VCR 1 or VCR 2 for example, then repeat the above procedure 3 and 4.



REMOTE CONTROL UNIT FACILITIES

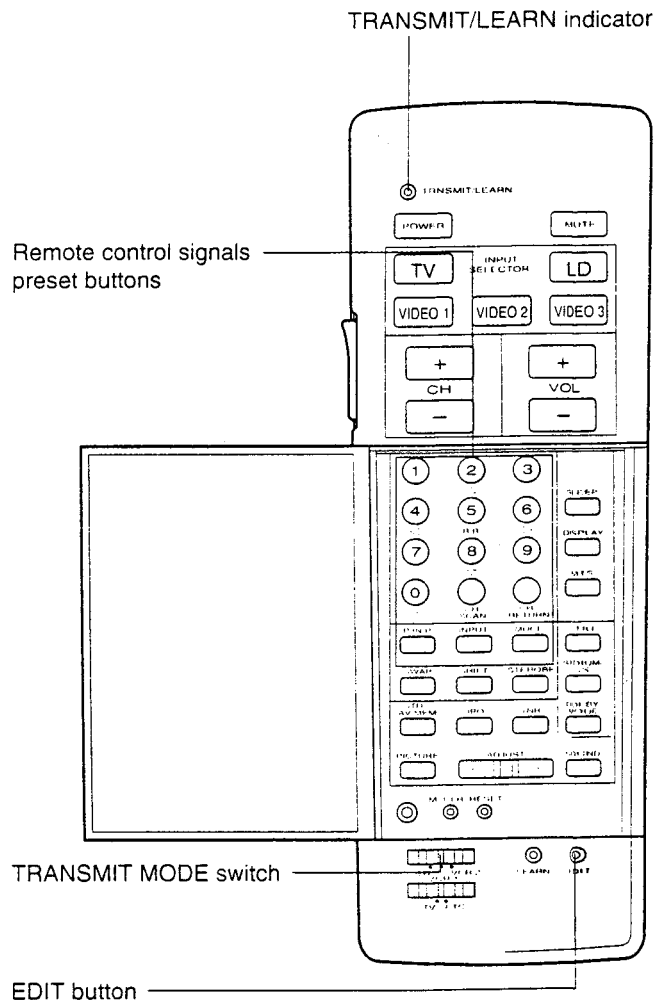
Operation example:

Presetting RCA VCR remote control signals to the remote control operation buttons when selecting the TRANSMIT MODE switch to VCR 1.

1. Set the TRANSMIT MODE switch to VCR 1.
2. Press the EDIT button.
   - The TRANSMIT/LEARN indicator will flashing on and off.
3. Press numeric button "1".
   - The TRANSMIT/LEARN indicator remains lit for approximately one second then will go off. RCA VCR remote control signals preset is completed to the remote control operation buttons.
4. Point the remote control at the sensor window of your RCA VCR you want to operate and press an operation button to confirm that remote control operation is possible.
   - If operation is possible, presetting has been completed.

NOTE:

- *After pressing the EDIT button, if you do not press a button within about one minute, the EDIT mode is cancelled.*
- *After presetting, you can use the LEARN mode to memorize a command in a preset button, but the preset signal is erased.*
- *After memorizing in the LEARN mode, if you preset operation buttons under specified buttons, signals memorized in the LEARN mode are cleared.*



[Remote control codes of other manufacturers]

The following table shows the operation buttons of the remote control unit used to call up the remote control codes of other manufacturer. Preset remote control signals/codes in the table, however, may not always enable operation. If operation is not possible, switch to the LEARN mode, and learn signals from the LD player or VCR remote control unit. Numbers in parenthesis indicate a reduced possibility of operation.

Operation button and Manufacturer's preset remote control signals

TRANSMIT MODE switch position	LD	VCR 1 or VCR 2
Operation button on the remote control unit	Manufacturers	Manufacturers
1	None	RCA
2	None	SHARP
3	None	ZENITH
4	SONY (MDP Series)	SONY
5	SONY (LD Series)	TOSHIBA
6	KENWOOD	HITACHI
7	PHILIPS	PHILIPS
8	PANASONIC	PANASONIC
9	PANASONIC	MITSUBISHI
0	PIONEER	PIONEER
CH SCAN	None	GOLDSTAR
CH RETURN	None	FISHER
P IN P	None	JVC
INPUT	None	NEC
MULTI	None	SANYO

REMOTE CONTROL UNIT FACILITIES

Questions and Answers on Programming Commands

Q: The remote control unit for my VCR has two REC buttons, which both have to be programmed at the same time to start recording. How should I program this into my programmable remote control unit?

A: Press and hold both REC buttons on the programmable remote control until the TRANSMIT/LEARN indicator lights up, and then press the two buttons on the VCR remote control simultaneously.

Q: The remote control unit of my VCR has a REC button and a PLAY button, and they both have to be pressed at the same time to start recording. How should I program this into my programmable remote control unit?

A: Press and hold both REC buttons on the programmable remote control until the TRANSMIT/LEARN indicator lights up, and then press the REC and PLAY buttons on the VCR remote control simultaneously.

NOTE:

If both buttons are not pressed simultaneously in the above mentioned operations, the commands will not be memorized.

Battery Replacement

Replace the batteries as soon as possible if pressing the control keys does not cause the TRANSMIT/LEARN indicator to light even after the RESET button has been pressed. Be sure to always use the specified batteries (LR6/AM3 alkaline batteries).

NOTE:

- *With batteries loaded and the cover off, memory is retained for about 15 minutes.*
- *Be very careful not to lose the battery compartment cover.*

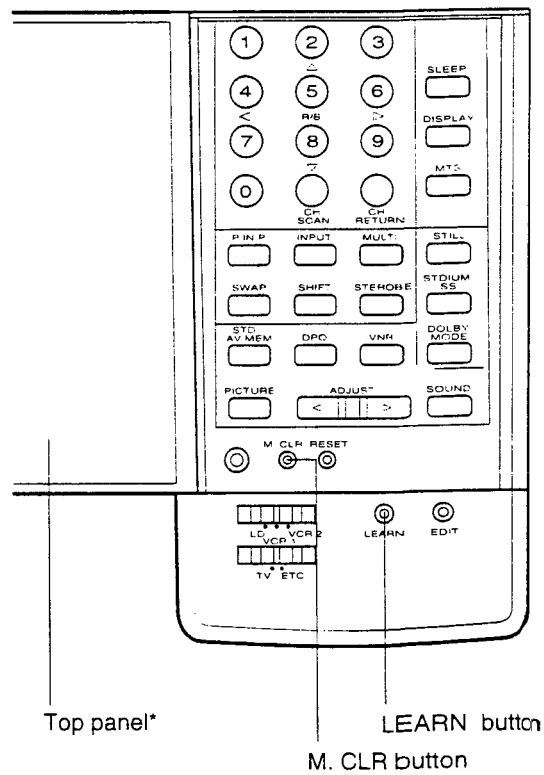
Returning to the Initial Settings

Follow the instructions below to return all settings to the PIONEER Remote Control Code Settings.

① Press the LEARN button.

② Using a ball-point pen or similar object, press and hold the M. CLR button down until the indicator flashes and then goes out.

All commands you programmed will be erased, and the unit will be reset to use codes initially set by PIONEER.



* Before operation, open the top panel. After all operations are completed, make sure that the top panel is securely closed.

REMOTE CONTROL UNIT FACILITIES

Control keys for a PIONEER LD Player and VCR bearing the mark

This remote control unit can be used to operate some functions of Pioneer marked VCRs and LD players. With Pioneer marked models, some remote control functions are not operable.
The TRANSMIT MODE switch is used to select whether the programmable remote control unit operation buttons will function as LD or VCR control buttons.

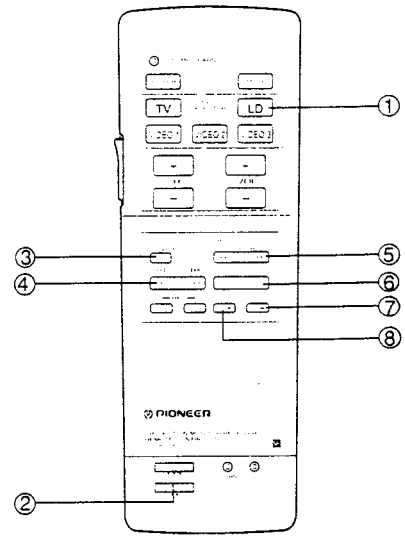
LD Player Control

① **Press the LD INPUT SELECTOR button to set the input selector of the monitor to LD.**
After presetting the remote control codes of the programmable remote control unit, close the top panel.
② **Set the TRANSMIT MODE switch to LD.**
③ **Press the POWER key to turn the power on.**
④ **Scan (◄◄ / ►►) button**
Press the ►► side of the button to search in the forward direction while playing back the videodisc.
Press the ◄◄ side of the button to search in the reverse direction while playing back the videodisc.
⑤ **Chapter Skip button (⏮ / ⏭)**
Press the ⏭ side of the button to skip directly to beginning of the next chapter, press the ⏮ side to skip directly back to the beginning of the chapter currently in play. This operation can only be performed on an LD Player with chapter skip function.
⑥ **Play (►) button**
Press to begin playback.
⑦ **Stop/Eject (■ ▲) button**
Press once to stop playback, twice to eject the disc.
⑧ **Pause/Still (❚❚ / ►◄) button**
Press to interrupt videodisc playback temporarily. Press the button again to resume playback.

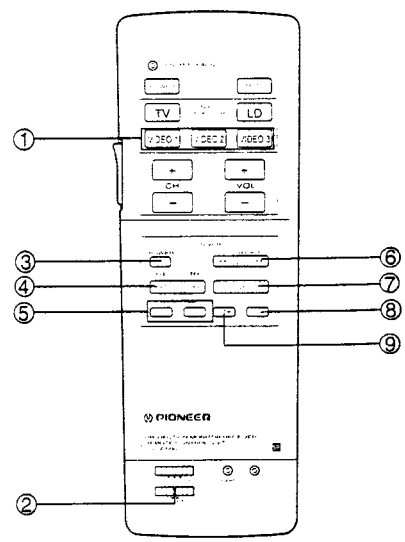
VCR Control

① **Press the VIDEO INPUT SELECTOR button to set the input selector of the monitor to VIDEO.**
After presetting the remote control codes of the programmable remote control unit, close the top panel.
② **Set the TRANSMIT MODE switch to VCR1.**
③ **Press the POWER button to turn the power on.**
④ **Rewind/Fast Forward (◄◄ / ►►) button**
This button allows high-speed movement through parts of the tape that you don't wish to watch. Press the left side of the button to rewind the tape, and the right side to advance.
During playback, use this button to search visually forward or backward.
Keep pressing the left or right side of the button until the section you wish to watch appears, then release it to resume normal speed playback.
⑤ **REC (Record) buttons**
Press both buttons at the same time to start recording.
⑥ **VCR CHANNEL +/– button**
Press to select the channel of the TV tuner on the VCR.
⑦ **Play (►) button**
Press to begin playback.

[LD]



[VCR]

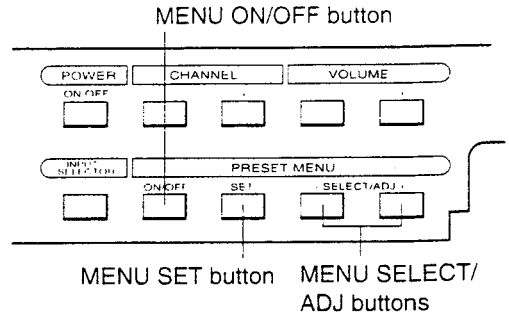


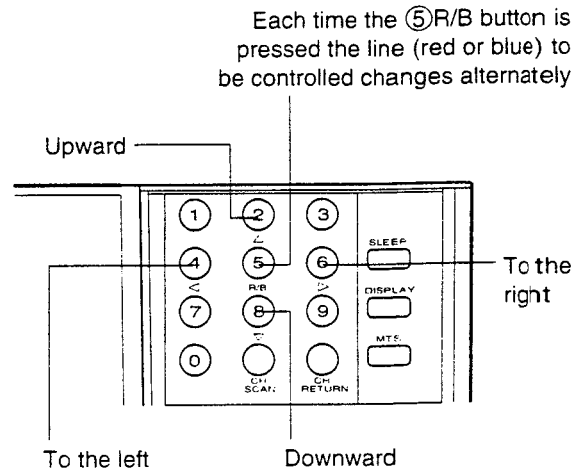
⑧ **Stop/Eject (■ ▲) button**
Press once to stop playback.
* Eject function will be performed only if your VCR is equipped with the remote control eject function.
⑨ **Pause/Still (❚❚ / ►◄) button**
Temporarily interrupts recording or playback, producing a still picture during playback.

HOW TO ALIGN COLOR CONVERGENCE

This Projection Monitor uses three separate TV tubes - a red, a green, and a blue tube. The red, green and blue images are projected onto the screen where they converge to form a full color picture. If they do not converge correctly, then you will see colored borders around the images.
Your dealer should adjust the color convergence when your monitor is delivered. However, convergence may drift over time or if you move the monitor.
Follow the steps below if color convergence alignment is needed.

1. Turn on the power and select an active channel. Wait a moment for the picture to stabilize.
2. Press the MENU ON/OFF button on the control panel. The monitor screen displays the menu (CONVERGENCE, AV MEMORY, DPO BASE, INPUT LABEL, TV-CATV MODE, SYSTEM MODE, and TUNER PRESET). Make sure that "CONVERGENCE" is displayed in red. If not, press the MENU SELECT/ADJ buttons until "CONVERGENCE" turns red.
3. Press the MENU SET button on the control panel. If color convergence is correct, there will be one vertical white line and one horizontal white line, as shown in figure 1.
4. If you see separate colored lines (Fig. 2 to 4), use the ⑤ R/B , ④ ◄ , ⑥ ► , ② ▲ , and ⑧ ▼ buttons on the remote control unit to make the red and blue lines disappear into the other lines.
   Each time the ⑤R/B button is pressed, the line to be controlled (red or blue) alternates.
   Pressing the ④ ◄ button moves the vertical line to the left, while pressing the ⑥ ► button moves the vertical line to the right.
   Pressing the ② ▲ button moves the horizontal line upward, while pressing the ⑧ ▼ button moves the horizontal line downward.
   In figure 2, for example, press the ⑤R/B button to control the red line, and then press the ④ ◄ button until the red line converges.
   Press the ⑤R/B button again to control the blue line, and then press the ⑧ ▼ button until the blue line converges. Convergence is correct when all three colors (red, green, and blue) converge, producing single white lines.
5. Press the MENU ON/OFF button when convergence is correct.




Each time the ⑤R/B button is pressed the line (red or blue) to be controlled changes alternately
Upward
To the right
To the left
Downward

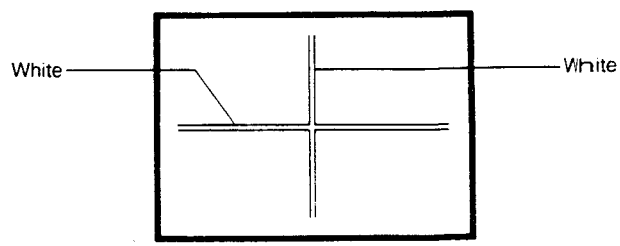


Fig. 1 Correctly aligned

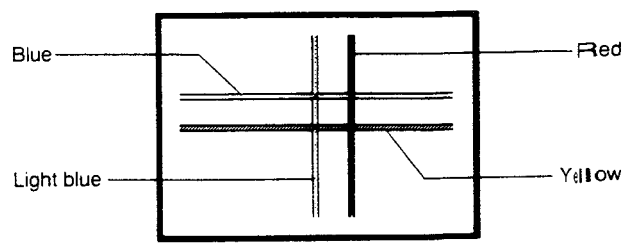


Fig. 2 Horizontal and vertical misalignment

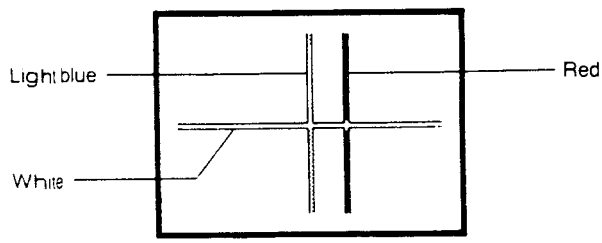


Fig. 4 Horizontal misalignment

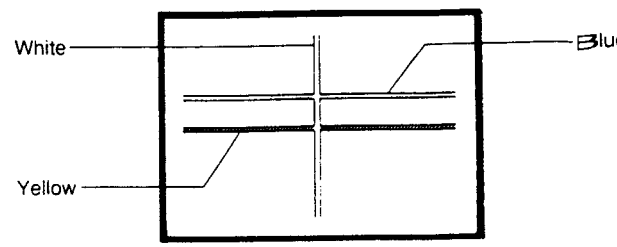


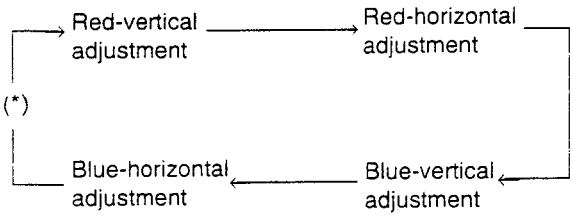
Fig. 3 Vertical misalignment

HOW TO ALIGN COLOR CONVERGENCE

Color convergence alignment without using the remote control unit

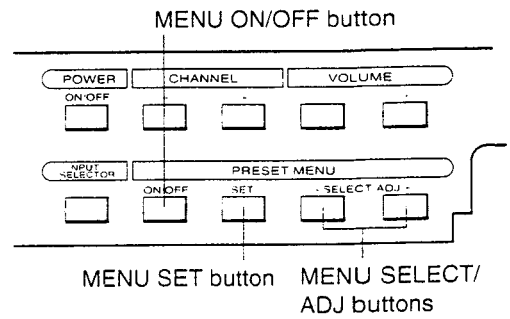
Color convergence adjustment can be performed by either the operation keys of the remote control unit as described in operation 4 of the above procedures, or the MENU SELECT/ADJ buttons and MENU SET button on the control panel as described below:

① **Press the MENU SET button to select the adjustment mode.**
The adjustment modes appear in the following order:
• Convergence adjustment test pattern and arrow will appear on the screen accordingly.



* Alignment proof mode; selected image only appears.

② **Use the SELECT/ADJ buttons as follows:**
During Red or Blue Vertical adjustment
Press the + button to move the horizontal line upwards.
Press the – button to move the horizontal line downwards.
During Red or Blue Horizontal adjustment
Press the + button to move the vertical line to the right.
Press the – button to move the vertical line to the left.

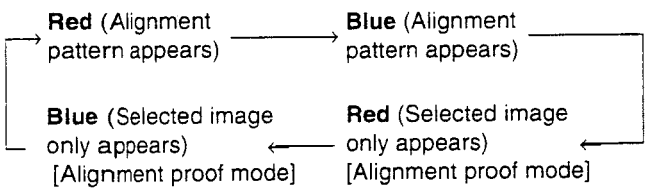


HOW TO ALIGN COLOR CONVERGENCE

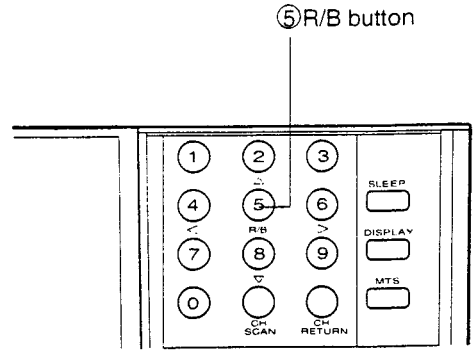
Notes for the convergence alignment adjustment

By repeatedly pressing the ⑤R/B button or the MENU SET button when the convergence alignment adjustment is engaged, a selected image can be displayed on the screen instead of the alignment cross pattern.
This is the alignment proof mode, which allows you to check the center of the images to ensure that colored borders are not seen after the adjustment.
In the alignment proof mode the alignment can also be adjusted by pressing the ②, ④, ⑥ and ⑧ buttons or pressing the MENU SELECT/ADJ button. However, it is difficult to adjust the alignment properly when only the images appears on the screen.
If you can still see colored borders around the images, press the ⑤R/B button or the MENU SET button again until the proper convergence alignment pattern reappears, and adjust the alignment by following the operations described on the previous page.
After all convergence alignment adjustment is finished, press the MENU ON/OFF button to set the monitor to its normal mode.

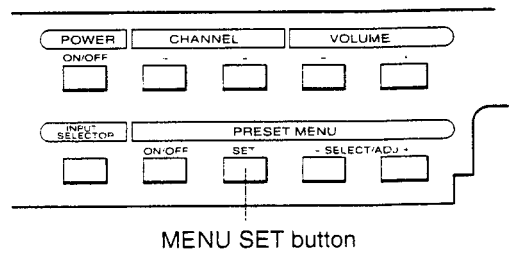
Each time the ⑤R/B button is pressed, the alignment adjustment mode will change as follows:


Red (Alignment pattern appears)
Blue (Alignment pattern appears)
Red (Selected image only appears) [Alignment proof mode]
Blue (Selected image only appears) [Alignment proof mode]

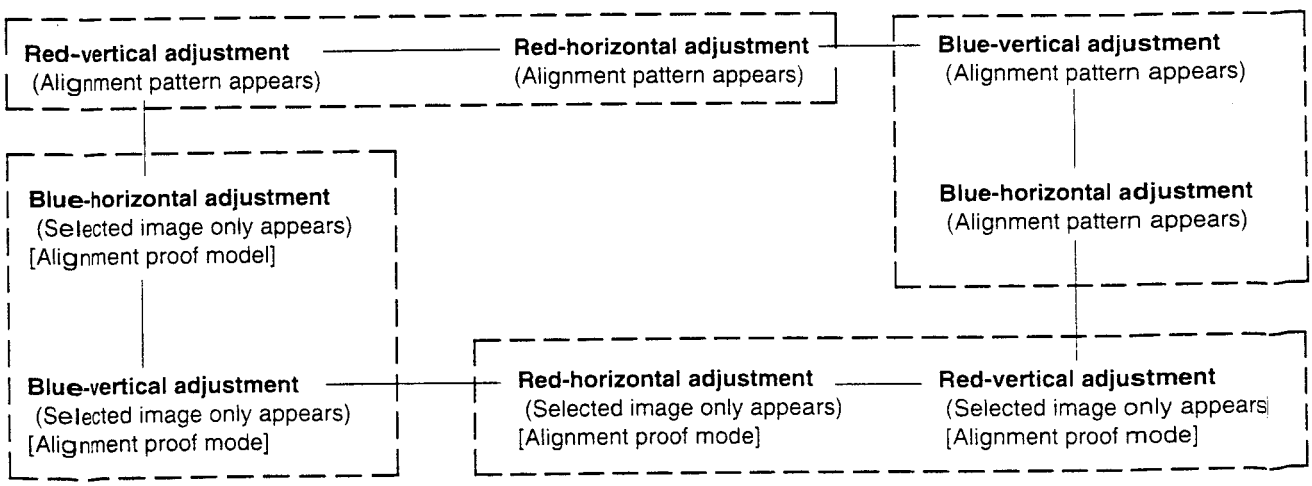
Convergence alignment adjustment can be performed by pressing the ②, ④, ⑥ and ⑧ buttons on the remote control after the alignment mode is selected.



* Before operation, open the top panel. After all operations are completed, make sure that the top panel is securely closed.



Each time the MENU SET button is pressed, the alignment adjustment will change as follows:


Red-vertical adjustment (Alignment pattern appears)
Red-horizontal adjustment (Alignment pattern appears)
Blue-vertical adjustment (Alignment pattern appears)
Blue-horizontal adjustment (Selected image only appears) [Alignment proof model]
Blue-horizontal adjustment (Alignment pattern appears)
Blue-vertical adjustment (Selected image only appears) [Alignment proof mode]
Red-horizontal adjustment (Selected image only appears) [Alignment proof mode]
Red-vertical adjustment (Selected image only appears) [Alignment proof mode]

Convergence alignment adjustment can be performed by pressing the MENU SELECT/ADJ button on the front panel after the alignment mode is selected.